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Canada, National Health and Welfare,
Research Division

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A STUDY OF THE FUNCTIONS AND ACTIVITIES OF HEAD NURSES IN A GENERAL HOSPITAL



GENERAL SERIES • MEMORANDUM N° 5

Research Division
DEPARTMENT OF NATIONAL
HEALTH AND WELFARE

OTTAWA
MAY 1954

CORRIGENDA

(2)

- page 41 - line 2: nearly two-thirds - should read - over two-thirds
- page 47 - footnote: pp. 105, 108-9 - should read - pp. 109, 112-3
- page 48 - line 6: (p.112) - should read - (p.117)
- page 51 - footnote: Appendix D-1 should read Appendix D-2
- page 62 - last sentence should read, in its entirety, as follows:
Head nurses on wards staffed entirely by graduate nurses spend more time on Education than those on wards with student nurses, but the difference is slight.
- page 63 - line 8: should read -
b) the turnover -- (admissions plus discharges)
as percent patient days
(or beds occupied)
- page 64 - footnote: should read - $\frac{1 \text{ Turnover} = \text{Admissions} + \text{Discharges}}{\text{Beds Occupied}} \times 100$
- page 64 - Table 18A: last column heading should read -
 $\text{Turnover}^1 \frac{100 (A+D)}{\text{Occup. Beds}}$
and figures given should read
(downward) as follows:
9.7, 23.2, 9.8, 9.3, 10.1, 15.5, 14.9, 11.4, 17.0, 5.4, 11.8,
66.4, 15.0; T.15.8
- page 65 - Table 18B: column six: 8.0 - should read - 8.8
last column: 2.06 - should read - 2.11
2.80 - should read - 2.90
- page 108 - third line of paragraph: Table 3 (p.21) -
should read - Table 3 (p.25)
- page 108 - fourth line from bottom: time percentages -
should read - true percentages
- page 109 - footnote 2: delete (Snedecor's F test)
- page 139 - Table F-22: last column: Mean 2.01 should read 2.19
2.19 should read 2.01

PLEASE AMEND YOUR COPY ACCORDINGLY

A STUDY OF
THE FUNCTIONS AND ACTIVITIES OF HEAD NURSES
IN A GENERAL HOSPITAL

Planned and conducted by
The Research Division, Department of National Health and Welfare

at the request of
The Canadian Nurses' Association

and with the co-operation of
The Ottawa Civic Hospital

Published by the authority of the Honourable Paul Martin
Minister of National Health and Welfare

FOREWORD

This study of the Activities of the Head Nurse in a large general hospital was carried out by the Research Division at the request of the Canadian Nurses' Association.

The study, which is one of a series sponsored by the Association covering different aspects of nursing, was designed to be more than a job analysis; in it an attempt was made to carry out a detailed investigation of the activities of the nurse in charge of a ward as they are related to her working environment. While the study itself is similar in many respects to others carried out in the United Kingdom and in the United States, both its scope and the methodology employed will be of considerable interest to students of nursing problems and of the principles of job analysis.

Persons interested in the problem of making the most effective utilization of existing nursing personnel will note with concern the evidence disclosed, in this as in other studies, of the fragmented nature of the duties performed by the Head Nurse. The extremely short duration of each activity⁽¹⁾ in which she engages, generally less than half a minute, would appear to give some strength to the assertion that she is not so much in control of her job as controlled by it.

(1) In the survey, the duration of an activity is measured by the period of attention devoted to a particular ward situation at one time, not to the total period required to deal with it.

It was found that the Head Nurses whose duties were studied were involved in all aspects of ward administration. The picture is one of short-term participation at all levels and in all types of activity, with the data suggesting that in the particular hospital studied possibly as much as 40 per cent of the work carried on by the Head Nurse might be delegated to subordinates. While the situation would differ somewhat in hospitals of a different size and with a different organizational pattern, there would appear to be considerable need for further detailed studies of nursing functions in individual hospitals, on which to base planning for segregation of those functions which can be delegated, for determining those persons to whom they can be delegated, and for ensuring that delegation is accompanied by adequate safeguards. It is hoped that this report will assist in the planning of methods of approach to possible and practical solutions to these problems.

A number of persons contributed to the study, which was greatly assisted by the aid and full co-operation extended by Dr. W. Douglas Piercey, the Superintendent of the Ottawa Civil Hospital in which it was carried out. Miss Edith Young, Director of Nursing at the Hospital, in addition to ensuring that all facilities and information required were made available to the study team, provided invaluable assistance in planning and carrying out the study. Miss Nettie D. Fidler, Chairman of the Committee on Nursing Care of the Canadian Nurses' Association, and Miss Dorothy Percy, Nursing Consultant to the Department, who served with Miss Young as advisors, supplied constant aid and helpful advice.

The study was carried out under the direction of Mr. Gordon H. Josie, Supervisor of the Methods and Analysis Section of the Research Division, who also prepared this report. Mr. Josie was assisted in the planning and carrying out of the study by Mrs. Marion Botsford, Assistant Registrar of the Registered Nurses' Association of British Columbia, and Mr. Charles B. Walker of the Research Division. Mrs. J.G. Thomson and Mrs. J. Edgar of the nursing staff of the Ottawa Civic Hospital acted with Mrs. Botsford and Mr. Walker as observers.

Finally, a special word of appreciation is due to the Head Nurses who allowed themselves to be watched, stop-watched and their activities to be minutely analyzed during busy working hours. Without their help the study would not have been possible; their good humoured and constant co-operation contributed greatly to the pleasure of carrying it out.


Joseph W. Willard,
Director, Research Division.

REPORT ON
A STUDY OF THE FUNCTIONS AND ACTIVITIES OF HEAD NURSES
IN A GENERAL HOSPITAL

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REPORT ON THE HEAD NURSE STUDY

I. INTRODUCTION

1. Origin

The Canadian Nurses' Association has for many years been interested in research into various problems affecting their profession. In 1929 the Association joined with the Canadian Medical Association in "A Survey of Nursing Education in Canada". Again in 1948 the Association, with financial assistance from the Canadian Red Cross Society, undertook the organization of a Demonstration School of Nursing. The C.N.A. also co-operated in surveys of nursing carried out in connection with the provincial health surveys under the National Health Grants Program in 1949 and 1950.

In 1951 the Association decided to prepare an integrated program for research in nursing. This plan included three major areas of study:

- a) the organization of the profession of nursing;
- b) the functions of nurses in hospitals, public health work, and private duty;
- c) the education of nurses for these functions.

To initiate this program the C.N.A. proposed three specific research projects, one in each of these areas: a structure study of the Association itself; a study of head nurse functions and activities; and an evaluation of the Demonstration School of Nursing at Windsor, Ontario.

The Association found itself inadequately equipped, technically and financially, to carry out all these studies and also wished to have the benefit of independent research. It decided to call on outside assistance, and the Department of National Health and Welfare was asked to undertake the second project -- the Study of Head Nurse Functions.

The Department was in accord with the view that the prevailing shortage of nurses warranted investigation of the most effective use of available nursing resources. It was recognized too that the stimulation of hospital construction by the National Health Grant Program tended to augment the demand for nurses.

More than half of employed graduate nurses are in hospitals and the proportion is increasing. It therefore seemed reasonable and expedient to initiate a study of nurse functions with a pilot project in a hospital. As the head nurse is recognized as a key-person in the hospital service, it was appropriate to start with the investigation of head nurse functions.

In the light of these considerations, the Department of National Health and Welfare undertook to carry out this specific project proposed by the Canadian Nurses' Association.

2. Purpose

This Study was therefore planned to obtain detailed information about the functions and activities of head nurses in a general hospital. Such information is essential in planning efficiently for the most effective use of limited nurse resources, and for improvement in

nursing service through such measures as re-allocation of functions among members of the hospital staff. To this end, the Study should answer such questions as:

- a) What does the head nurse do?
- b) How frequently does she carry out various activities?
- c) What proportion of her time is spent in activities of various types?
- d) Is she performing any duties of which she could be relieved?

The Study was also intended to be a pilot project in the sense of developing and demonstrating a suitable methodology for the investigation of nursing functions in a hospital.

3. Organization

The Head Nurse Study was a co-operative enterprise of the Canadian Nurses' Association, the Ottawa Civic Hospital, and the Department of National Health and Welfare. The Study has been carried out by the Research Division of the Department. A Planning Committee, made up of the nursing consultants to the program and the Director and members of the Research Division staff, provided guidance and advisory services during the course of the Study which was carried out under the direction of Gordon H. Josie, Supervisor of the Research Methods and Analysis Section of the Division, assisted by Charles B. Walker of the Division and Mrs. Marion Botsford*, who also acted as liaison between the hospital

* Mrs. Botsford, Assistant Registrar of the Registered Nurses' Association of British Columbia, was engaged by the Research Division as Nursing Research Assistant for a period of three months.

and Department as well as providing advice and assistance on technical details of nursing practice.

Nursing Consultants for the Study were Miss Nettie D. Fidler, Chairman, C.N.A. Committee on Provision of Nursing Care, Miss Edith Young, Director of Nursing at the Ottawa Civic Hospital, and Miss Dorothy Percy, Nursing Consultant of the Department of National Health and Welfare.

The Ottawa Civic Hospital was selected by the Canadian Nurses' Association because it is a large general hospital, conveniently located and generally suitable for the Study, and particularly since Dr. W. Douglas Piercey, the Superintendent, and Miss Edith Young, Director of Nursing, were interested in the project and willing to co-operate. The Hospital also made it possible for Mrs. J. G. Thomson and Mrs. J. Edgar of the nursing administration staff to serve as observers. Basic data respecting the Ottawa Civic Hospital, the locale of the Study, are given in Appendix A.

It must be emphasized that this Study is not a critical assessment of the nursing service of the Ottawa Civic Hospital. This Hospital was selected for the reasons given above in an attempt to get a picture of head nurse activities in a reasonably representative large Canadian general hospital. As indicated in Appendix A, this Hospital is not atypical in general characteristics and work load. Any observations and recommendations based on the results are of value chiefly to the extent that they may be applied generally and are not restricted by peculiarities of the Ottawa Civil Hospital situation.

II. PLAN AND METHODOLOGY

1. Introduction - Other Studies

In proceeding from the general terms of reference to a detailed plan for the study, the Research Division undertook a review of the literature in this field (see Appendix B - Bibliography). Particular mention should be made of the U.S. Public Health Service study of head nurse activities in the Massachusetts General Hospital, the Nuffield job-analysis of the work of nurses in hospital wards, and "A Functional Analysis of the Nursing Service Team" by Viola Constance Bredenberg. Preliminary reports of the first two of these studies were available but the final reports were not issued until this Study was essentially completed. In the Massachusetts General Hospital investigation emphasis was on the time factor; the Nuffield Study was much more comprehensive than the one planned here; and the Bredenberg project was directed to a comparative study of two methods of providing nursing service. These studies and others were found to be informative and suggestive, but the procedures were not directly applicable to, or adequate for, the present investigation.

2. Design of the Study

What Was To Be Observed and Measured

In view of the purpose of this investigation, it was clear that a time and motion study would not be appropriate, but rather, in this project activity was to be considered as purposive action of a specified nature. Further, the type of activity must be considered and described in objective but functional terms which would include reference to related significant factors, particularly:-

Place -- where the activity occurred; so that it would be possible to say, for example, whether the head nurse was generally at her desk or out in the ward most of the time.

Contacts -- persons with whom she was carrying on the activity; for example, how much of her time was spent with others in contrast to time spent alone.

Equipment and Supplies -- to what extent is the head nurse involved in dealing with equipment and supplies of various kinds; particularly, "Does 'paper work' take much of her time?"

In addition to a description of the activity and these related factors, it was necessary to determine accurately the frequency of activities, both absolute and relative. We wanted to know how many times a specific activity occurred; which activities were the most frequent, and so on. Finally, we were concerned with the duration of the activity. Accurate timing of the observed activities was essential if we were to be able to answer the questions posed.

Where, When and by Whom were Activities to be Observed

The subject of the Study, the head nurse, and the locale, the Ottawa Civic Hospital, were settled in the general terms of reference for the investigation. Preliminary review of the literature and consideration of the problem established the nature of the observations and measurements, as indicated above. There were still to be settled the questions: Which wards were to be observed? When were observations to be made and who were to be the observers?

In order to make this Study as comprehensive and representative as possible, all head nurses in the hospital should be observed. An exception might be made of those head nurses in charge of maternity wards, operating rooms, and the out-patient department, as they have specialized functions. The research group agreed with the suggestion of the Director of Nursing at the Ottawa Civic Hospital that observations should be taken in the fall, after the school of nursing began its term. It was further decided that all of the normal 12-hour hospital day should be represented as well as each day of the week from Monday to Friday, inclusive.

Competent observers were essential and fortunately four suitable persons were available. Two of these, Mrs. Edgar and Mrs. Thomson, were senior nurses on the administration staff of the hospital; one, Mrs. Botsford, was the nursing research assistant engaged specifically for the Study; and the fourth observer, Mr. Walker, was a member of the research staff of the Department. These four were all able to make accurate and objective observation records after a brief training period. As this was a pilot project, there was some advantage in having a diversity among the observer group. Because of greater possibility of bias it was considered inadvisable to have the head nurses themselves make the observations. In any case, this could not be done without undue interference with the hospital nursing arrangements.

The question of the length of the observation period was a matter of some special enquiry, since it depended on the convenience of the hospital, the numbers of observers available, and the time considered necessary to get an adequate picture of the head nurse's activities.

After a trial it was apparent that more than one or two consecutive hours of observation would cause undue fatigue or inconvenience to the observers or head nurses. One-hour observation periods rather than longer intervals would permit the observations to be spread over a greater length of time and the smaller sampling unit makes for greater accuracy and a more representative sample.

It was found that eight one-hour periods could be arranged to cover adequately the twelve hours of the hospital day (7.00 A.M. to 7.00 P.M.) This not only resulted in a saving of observation time but made it practical to have a number of observations on the same day or even in sequence, since 15 minutes or more were free between periods. The periods were as follows:

- 1: 7.00 - 8.00 A.M. or 7.30-8.30 A.M.
- 2: 9.00 -10.00 A.M.
- 3: 10.15 -11.15 A.M.
- 4: 11.30 A.M. - 12.30 P.M.
- 5: 1.30 - 2.30 P.M.
- 6: 3.00 - 4.00 P.M.
- 7: 4.30 - 5.30 P.M.
- 8: 6.00 - 7.00 P.M.

Schedule for Observations

A schedule of observations was drawn up to cover 120 observation hours randomly distributed over a ten-day period, Monday to Friday of two successive weeks. This represented a 10% sample of the total of 1200 possible observation hours, (eight one-hour periods per day for each of the fifteen head nurses during the full ten-day period). This schedule is shown in Figure 1, and a copy of the information and instructions for Observers and Head Nurses and other explanatory notes are included in Appendix C.

OBSERVATION SCHEDULE

Observers: A, B, C, D

Periods: 1-8 (see p. 8)

Second Week, October 22-26, 1951

[illegible]

The schedule was designed to meet the following specifications to ensure adequate coverage of head nurses' activities throughout the 12 hours of the hospital day:

- a) each head nurse to be observed for eight one-hour periods;
- b) the eight periods for each head nurse to cover a full twelve-hour hospital day;
- c) each head nurse to be observed by each of the four observers for two periods;
- d) the observation periods to be distributed randomly (within the above restrictions) throughout the two-week period.

The observation periods to be distributed so that there will be:

- a) a maximum of three observation periods in a day for any head nurse;
- b) a maximum of five observation periods in a day for an observer.

Activity Record

A form was designed to permit of the ready and accurate record of timed observations of activities and the related factors; see Figure 2. It will be noted that the Activity Record provides for the activity observed, the place it occurred, and persons, equipment and procedures involved as well as the topic of any relevant conversation. The date, period of the day, ward, person observed, and observer were also recorded. The individual record sheet covers a period of ten minutes. The complete one-hour record required six of these sheets. It was found quite feasible, after a suitable trial, to record the duration of activities to the nearest quarter-minute. The starting time only for each activity was recorded opposite the nearest 15-second mark on the sheet. The duration of an activity was the elapsed time in 15-second intervals between the starting times for two consecutive activities. Timing was done by

HEAD NURSE STUDY
ACTIVITY RECORD FORM

DATE _____ WARD _____ HEAD NURSE _____ OBSVR _____

TIME	PLACE	ACTIVITY	PERSON	EQUIPMENT & PROCEDURE	TOPIC OF CONVERSATION
0.00					
0.15					
0.30					
0.45					
1.00					
1.15					
1.30					
1.45					
2.00					
2.15					
2.30					
2.45					
3.00					
3.15					
3.30					
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6.45					
7.00					
7.15					
7.30					
7.45					
8.00					
8.15					
8.30					
8.45					
9.00					
9.15					
9.30					
9.45					

Actual sheet - 8½ x 14 inches — lines double spaced on typewriter.

stop-watch. The observers followed the head nurses closely enough to be aware of all activities and generally the content of conversations. Occasionally, where necessary, further details were obtained by direct questioning of the head nurse. The head nurse was, of course, aware of being observed.

Abbreviations were used in the record but there was no coding of activities at the observation stage. The aim was to make the activity record as complete, accurate and unbiased as possible. A sample of an actual Activity Record is given in Figure 3.

HEAD NURSE STUDY - ACTIVITY RECORD

DATE October 22

WARD C

HEAD NURSE Mrs. H.

OBSVR A.

TIME*	PLACE	ACTIVITY	PERSON	EQUIPMENT & PROCEDURE	TOPIC OF CONVERSATION
5.00	C	asks	Ord.		Are you going to main Bldg? No.
5.15	M C	gives tells	"	chart	Take to Dr. F.
5.30	"	"	Ord.2		Put cap on - O R Stockings too
5.45	C	xxx			
6.00	C	xxx			
6.15	D	writes asks		Req.for supply (re cards)	What doing with that? wax cards.
6.30	C D	Q & A receives	Ord	chart	Did you send for this? Yes.
6.45	"	checks		chart (old chart)	
7.00	"	reads, checks		"	
7.15	"	" "		"	
7.30	"	" "		"	
7.45	"	"		"	
8.00	"	tells	A.H.N.		Mr. E. was in 1939 with poss. gastric ulcer
8.15	"	puts(away) Q & A	"	chart	Under Dr. D & Dr.R? Yes
8.30	"	" "		"	
8.45	W C D	tells and gives	W C W C	X Ray slip	Send those 2 men as soon as ord. free
9.00	"	Q & A	A.H.N.		Orderly? I told them - are taking now
9.15	M C	gets		Kardex Card	
9.30	D	checks		"	
9.45	"	writes & puts away		"	

* This extract covers the 5 minutes from 11.10 to 11.15 A.M.

3. Procedure for Analysis

Classifications and Codes

For purposes of analysis of the data it was necessary to prepare suitable classification and code systems for the activities, places, persons and equipment involved in the activities observed. The latter three classifications and codes were relatively simple; they involved grouping of persons, for example, into medical staff, nursing administration, nursing service and similar categories, and the preparation of corresponding two-digit codes. (See Appendix C-2, 3, 4.)

The classification and coding of the functions and activities of head nurses proved to be a major undertaking but one of the most interesting and valuable features of the Study. While there was no classification and code for head nurse functions and activities adequate for our purpose, we did make use of the list of nursing activities in the Johns and Pfefferkorn book "An Activity Analysis of Nursing" and the system used by the U.S. Public Health Service in the Head Nurse Study in the Massachusetts General Hospital; also other authoritative statements about nursing functions and activities, particularly that in the Hospital Nursing Service Manual.

The new detailed and comprehensive classification and code we devised has divided the functions and activities carried on by the head nurse into three main areas:

- a) patient care
- b) ward administration and housekeeping (non-nursing)
- c) personnel administration

In each of these three areas the activities were classified into five levels of function:

- i) Management
- ii) Education or Teaching

- iii) Supervision
- iv) Direction
- v) Execution

It was found that activities to be classed as Supervision or Direction could in all cases be represented by a simple designation of one of the activities under Education or Execution, generally the latter. The suffix S or D was added to the code number to indicate supervision or direction, respectively.* The actual activities listed under the headings in each of the three areas resulted in a system of about 250 specific functions or activities of the head nurse. The full classification and code is included in Appendix E. The number of items of the code corresponding to specific activities is shown by area and level in the table below and in greater detail in Appendix E.

The full potentialities of the classification system are evident in the tables and discussion of the results of the Study in Part III of this Report. It will be noted that the code is arranged so that the letter and three-digit number for an activity indicates the area of activity by the letter P, H or S, and the level of activity by the hundreds digits. The tens-digits indicate activities having a more or less common purpose; these might be described as "functions". The units digit identifies the specific activity.

Number of Activity Code Items (Specific Activity Types) By Area and Level

Level of Activity	Area of Activity			Total
	Patient Care	Ward Administration	Personnel Administration	
	P	H	S	
Management (100-199)	14	10	6	30
Education (400-499)	12	2	8	22
Execution (500-699)	<u>112</u>	<u>55</u>	<u>33</u>	<u>200</u>
T o t a l	<u>138</u>	<u>67</u>	<u>49</u>	<u>254</u>

* Eg., P.532S supervising the administering of drugs and medications (Table 7A & B).

Coding and Tabulation

The coding of the activity and related factors according to the system described above was done directly on the activity record sheets. The activity classification is quite complex and required familiarity with the code and the nature of the records; one person, Mr. Walker, coded all the records. This operation involved, of course, consultations and decisions regarding the appropriate designation for activities described in the notes on the activity records. Any difficulties were usually resolved quite readily but the initial trial coding period enabled us to develop the classification mainly by way of adding items or improving the specification of the activities. The classification and code was, therefore, amended in the light of the actual recorded information, but no fundamental change in the system was necessary. The actual records were completely coded according to the final version of the classification. The coding was checked for consistency by reviewing and comparing activity descriptions which had been given the same code number. This was particularly necessary since a considerable period was required for the coding process.

In view of the number of activities recorded and the number of factors involved, it was evident that a card system would be required for the analysis. The numbers, however, did not seem to warrant use of automatic punch card equipment. Ordinary cards might have been used for hand sorting. But the use of marginally-punched cards had considerable advantages for our purposes since they were easily punched with simple equipment, were relatively inexpensive, and provided a complete code record for checking and comparison with the observation record.

A marginally punched keysort card (McBee Company) was designed for the purpose. A completed card using one of the activities from the record in Figure 3 is shown in Figure 4. The codes used in preparing the cards are given in Appendix C with certain explanatory notes.

[illegible]

Figure 4. Completed Activity Record Card

In the activity represented by this card (Fig.4) the Head Nurse
(by A)
herself (2-1) is being observed/giving information about the patient (P.682)
to a member of the nursing staff, the Assistant Head Nurse (43). She got the
information from a chart (200). This activity took place at the chart desk (5)
in Ward 14 and lasted 3 intervals on October 22 (1st day of 2nd week), in
period 3 (at 11.13 A.M.). That
the C.N.A. regarded this as a Head Nurse function is
indicated by code number 2 in section 10 of the card.

Tabulations

After the activity record (keysort) cards were coded and punched, they were sorted by activity code number and then by frequency, by ward, by observer, and other variables. By using large master tabulation sheets, the number of major sorts and counts was kept to a minimum and most of the final tables (Part III) were prepared from these master sheets.

The nature of the tabulations will be evident from the tables given below but in the following master tabulations a count was made in each case of both activities (number of record cards) and time involved (duration):

- i) activities and time by complete classification versus duration (1,2,3,.... intervals)
- ii) activities and time for the complete activity classification versus head nurses (Nos. 1 to 15)
- iii) activities and time for the complete activity classification versus observer (A,B,C,D)
- iv) activities and time for activity groups versus status of nurse observed
- v) activities and time for activity groups versus period of the day

In addition, tabulations were made for activities and time in relation to locations (places), contacts (persons), and forms, equipment and supplies involved.

III. ANALYSIS OF THE DATA -- RESULTS

It is proposed to comment first on the frequency and duration of the activities and then to discuss the nature of the observed activities in terms of the classification and code, that is, according to area, level, and specific types. Then the related factors - places, contacts, equipment and procedures involved will be considered. Following this, attention will be directed to any differences associated with the time of the day and with ward characteristics. Finally, we shall consider the results in the light of the Canadian Nurses' Association designation of functions appropriate to head nurses.

1. Frequency and Duration of Activities

Activities were timed to the nearest quarter-minute so that in the 120 hours of observation there were 28,800 intervals of 15 seconds duration. As indicated in Table 1, a total of 14,028 activities were observed in this time. Thus we have the impressive fact that head nurses are engaged in activities which are on the average of only one-half minute duration. The median, another form of average, was 0.86 interval; this means that half the activities were less than one-quarter minute in duration.

Table 1

Number and Average Duration of Activities

Total observation time	28,800 intervals (120 hours)
Total number of activities observed	14,028
Average duration of activity	Mean 2.05 \pm 0.030* intervals
Interval = 15 seconds	

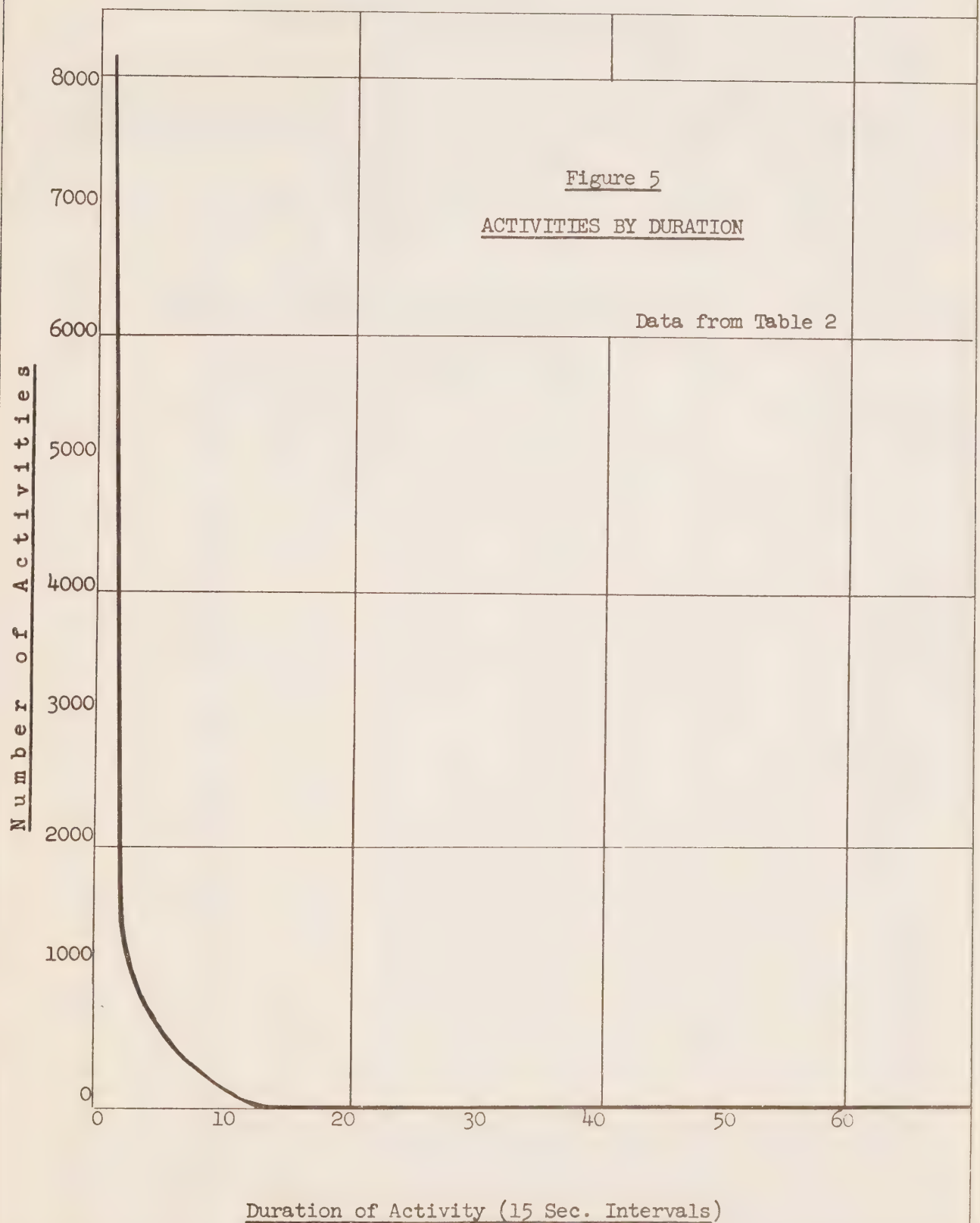
* Standard Error 0.030 intervals. See Appendix D.

To appreciate the significance of these average figures it is helpful to examine the distribution of all activities by duration. This is shown in a simple graph, Figure 5. In contrast to the "normal" frequency distribution, with most of the individuals grouped in the middle of the range and few having extreme values, the distribution of head nurse activities is characterized by the very great number of short duration; this J-shaped distribution falls off very abruptly so that even relatively short durations, such as a few minutes, are quite rare.

Expressed another way, about one-half of the total time was occupied in activities each lasting about two intervals, $\frac{1}{2}$ -minute or less. The distribution of time cumulatively by duration of activity to indicate this is shown in Figure 6. Data for Figures 5 and 6 are given in Table 2. Over 93% of the activities lasted one minute (four intervals) or less and these accounted for 70% of the total time. Activities taking a considerable period of time, say five minutes (20 intervals) or more, are relatively infrequent representing only 51 of the 14,028 activities. They account for about 5% of the total time.

The head nurses may have been carrying on at a particularly high level of activity while being observed. Some of the observers had this impression and some head nurses themselves considered this to be so.* This evidently implies that the head nurse's idea of being busy is to be very active. However, the consistently low average duration throughout the two weeks of random observation periods, the nature of the frequency distribution, and the paucity of activities lasting more than one minute

* "The Impact on the Hospital", Edith Young. The Canadian Nurse, Vol.48, No.12, December, 1952. p.980.



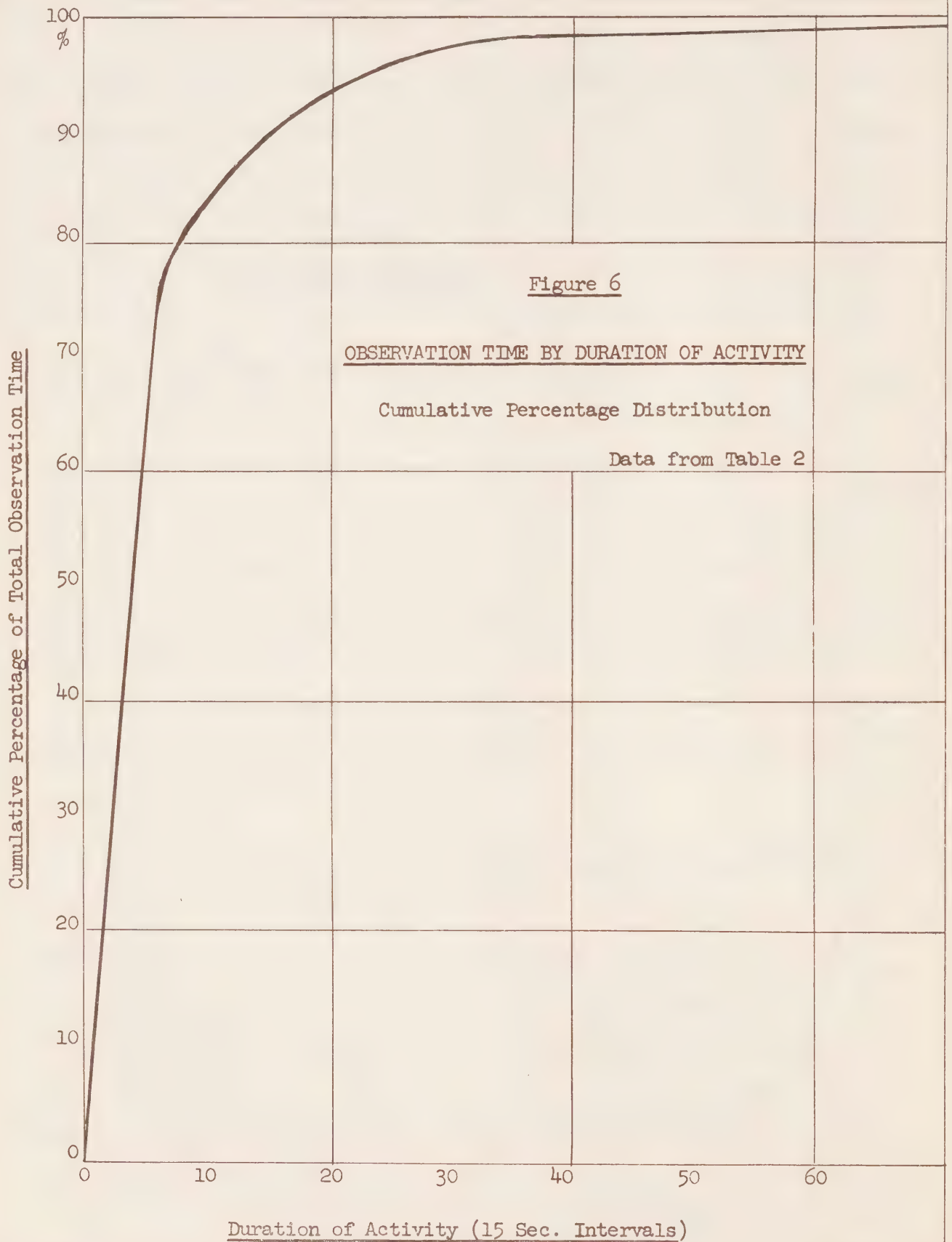


Table 2

Distribution of Activities by Duration

Duration		Activities			Time		
Minutes	Intervals	No.	%	Cum. %	Total	%	Cum. %
<u>1</u>	1	8,180	58.31	58.31	8,180	28.40	28.40
	2	3,149	22.45	80.76	6,298	21.87	50.27
	3	1,165	8.30	89.06	3,495	12.14	62.40
	<u>4</u>	568	4.05	93.11	2,272	7.89	70.29
	5	307	2.19	95.30	1,535	5.33	75.62
<u>2</u>	6	175	1.25	96.55	1,050	3.65	79.27
	7	121	0.86	97.41	847	2.94	82.21
	<u>8</u>	73	0.52	97.93	584	2.03	84.23
	9	66	0.47	98.40	594	2.06	86.30
	10	44	0.31	98.72	440	1.53	87.82
<u>3</u>	11	30	0.21	98.93	330	1.15	88.97
	<u>12</u>	25	0.18	99.11	300	1.04	90.01
	13	21	0.15	99.26	273	0.95	90.96
	14	13	0.09	99.35	182	0.63	91.59
	15	11	0.08	99.43	165	0.57	92.17
<u>4</u>	<u>16</u>	8	0.06	99.49	128	0.44	92.61
	17	7	0.05	99.54	119	0.41	93.02
	18	9	0.06	99.60	162	0.56	93.59
	19	5	0.04	99.64	95	0.33	93.92
	<u>20</u>	10	0.07	99.71	200	0.69	94.61
<u>5</u>	21	6	0.04	99.75	126	0.44	95.05
	22	6	0.04	99.79	132	0.46	95.51
	23	2	0.01	99.81	46	0.16	95.67
	<u>24</u>	1	0.01	99.81	24	0.08	96.75
	25	4	0.03	99.84	100	0.35	96.10
<u>6</u>	26	2	0.01	99.86	52	0.18	96.28
	27	2	0.01	99.87	54	0.19	96.46
	<u>28</u>	2	0.01	99.89	56	0.19	96.66
	29	1	0.01	99.89	29	0.10	96.76
	30	1	0.01	99.90	30	0.10	96.86
<u>7</u>	31	2	0.01	99.91	62	0.22	97.08
	<u>32</u>	0	-	-	0	-	-
	33	3	0.02	99.94	99	0.34	97.42
	34	0	-	-	0	-	-
	35	1	0.01	99.94	35	0.12	97.54
<u>8</u>	<u>36</u>	2	0.01	99.96	72	0.25	97.79
	37	1	0.01	99.96	37	0.13	97.92
	38	0	-	-	0	-	-
	39	1	0.01	99.97	39	0.14	98.06
	<u>40</u>	-	-	-	-	-	-
<u>9</u>	43	1	0.01	99.98	43	0.15	98.21
	67	1	0.01	99.99	67	0.23	98.44
	52	1	0.01	99.99	208	0.72	99.16
	208	1	0.01	99.99	208	0.72	99.16
	<u>240</u>	1	0.01	100.00	240	0.83	99.99
Total		14,028	100.00	100.00	28,800	100.00	100.00

suggests that any adjustment in this connection would be of minor importance. In fact, the findings in this study corroborate and throw further light on the observations in the U.S. P.H.S. Report "Head Nurse Activities In A General Hospital"¹ regarding the tendency to perform some major activities in a "piecemeal" fashion. This study reported many major activities discontinued after less than one-half minute. The importance of this extremely low average duration of activity can hardly be over-emphasized when we know that the head nurse is expected to be "one who is responsible for the direct management and supervision of a single unit".²

It must be pointed out that the restricted range of the average duration of activities found throughout the analysis seriously limits, for practical purposes, comparison of activities in terms of mean duration. Our discussion must generally be based on the relative proportions of time involved in various activities or groups of them, rather than direct comparison of mean durations.

¹ U.S. Public Health Monograph No.3. Superintendent of Documents, Washington, D.C. p.10,15.

² Hospital Organization and Management, Malcolm T. MacEachern. Chicago. 1947. p.423.

2. Nature of the Activities

Areas of Activity

The classification system permits of the description of the activities in various ways, including area, level, and specific kind of activity. The major areas are Patient Care (P), Ward Administration (H), and Personnel Administration (S). The frequency and duration of activities in these three areas are shown in Table 3. The distribution of activities and time is also indicated in Figs. 7 and 8.

Table 3

Number and Duration of Activities by Major Areas

Major Area	Activities		Duration			
	No.	%	Total	%	Mean	
P - Patient Care	10,448	74.5	21,858	75.9	2.00 7	.023
H - Ward Admin.	2,045	14.6	3,635	12.6	1.78 7	.038
S - Personnel Admin.	1,310	9.3	3,040	10.6	2.32 7	.256
Other	225	1.6	267	0.9	1.19 7	.040
	14,028	100.0	28,800	100.0	2.05	.030

About three-quarters of the time of the head nurses was spent in activities concerned with Patient Care. Such activities were 75% of the total number. Ward Administration, involving housekeeping and other non-nursing duties, was next in importance with about 15% of activities and 13% of time. The third area, Personnel Administration, accounted for about 10% of activities and time. The remainder, less than 2% of activities and 1% of time, was taken up with personal affairs and unallocated actions such as time in transit.

Activities in all areas were of consistently short duration. The average again was about one-half minute and there was no practical difference between the areas in this respect. The frequency distribution

Figure 7.

ACTIVITIES BY AREA

Percent Distribution

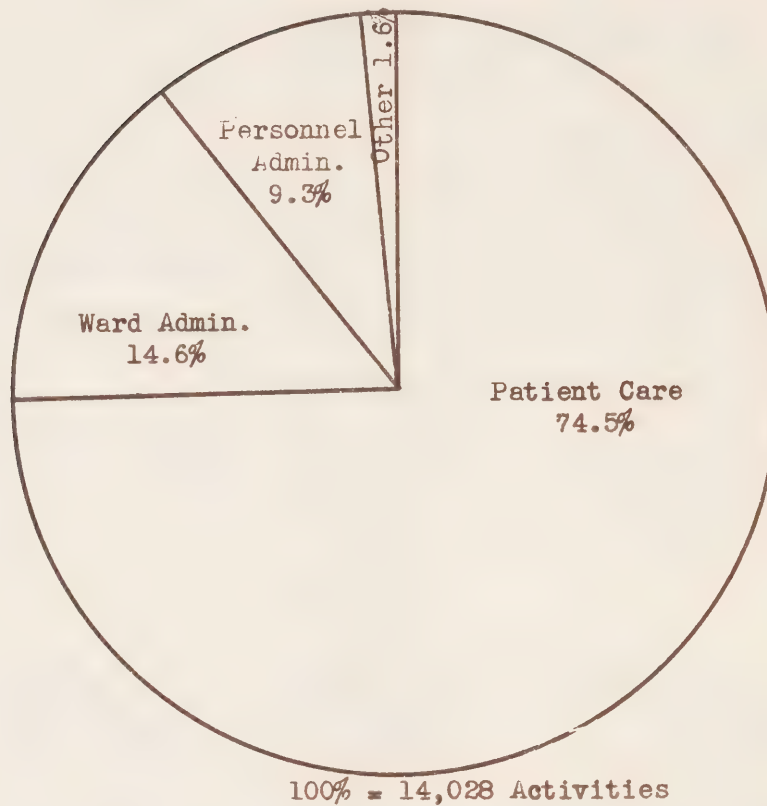
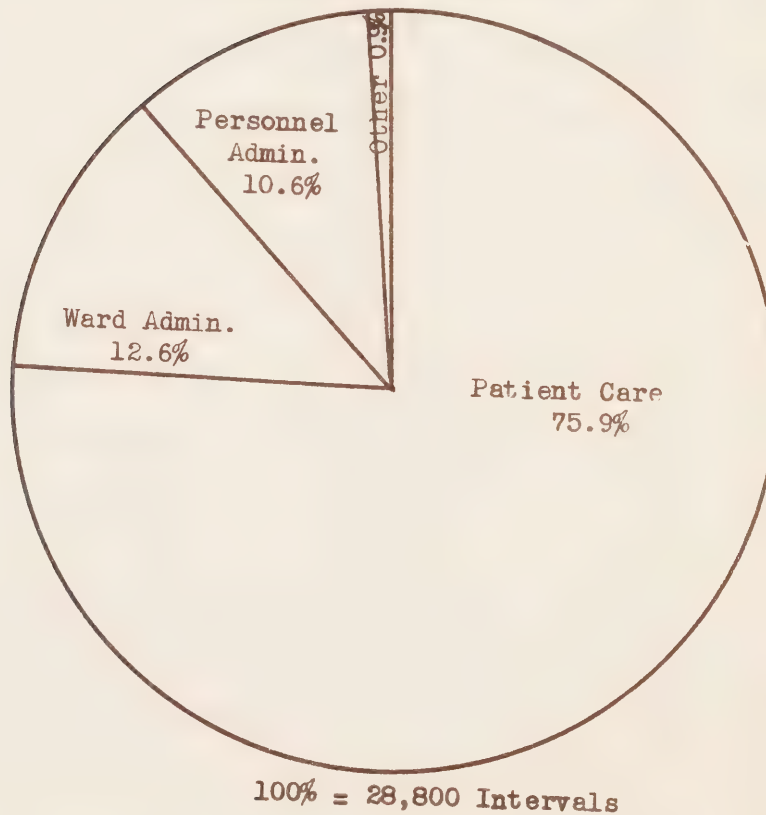


Figure 8.

ACTIVITY TIME BY AREA

Percent Distribution



by intervals for each area is similar in form to that given in Table 2 and accompanying graphs, and need not be repeated in this instance.

Levels of Activity

In addition to the division of activities by major area, they have also been classified according to "level" of function. The distribution of all the activities by level is given in Table 4, and Figures 9 and 10.

Table 4

Number and Duration of Activities by Levels

Level of Activity	Activities		D u r a t i o n			
	No.	%	Total Time	%	Mean	
100 Management	883	6.3	2,326	8.1	2.63 $\frac{1}{2}$.118
S Supervision	2,431	17.3	4,773	16.6	1.96 $\frac{1}{2}$.044
D Direction	966	6.9	1,336	4.6	1.38 $\frac{1}{2}$.025
400 Education	366	2.6	1,289	4.5	3.52 $\frac{1}{2}$.864
Execution	(9,157)	(65.3)	(18,809)	(65.3)	(2.05 $\frac{1}{2}$.026)
500 Direct	4,052	28.9	7,992	27.7	1.97 $\frac{1}{2}$.038
600 Admin. & Clerical	5,105	36.4	10,817	37.6	2.12 $\frac{1}{2}$.035
Other	(225)	(1.6)	(267)	(0.9)	(1.19 $\frac{1}{2}$.040)
200 In-transit	219	1.6	246	.8	1.12 $\frac{1}{2}$.265
300 Personal	6	.0	21	.1	3.50 $\frac{1}{2}$.656
T o t a l	14,028	100.0	28,800	100.0	2.05 $\frac{1}{2}$.030

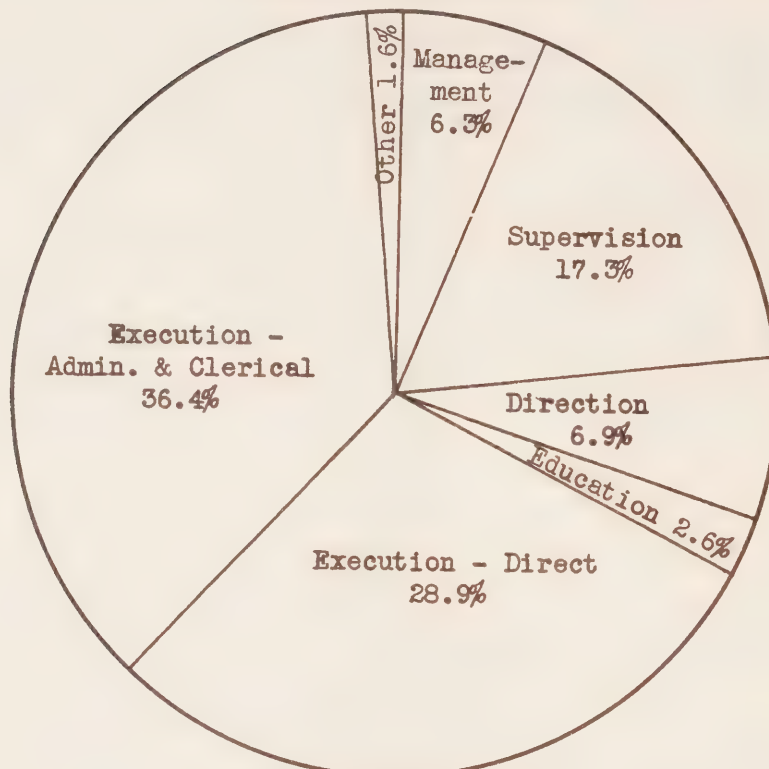
Management, Supervision, and Direction are functions consistent with the idea of a head nurse as the administrator of a nursing unit. About 30% of the observed time was spent in activities of this kind. Supervision was the most common of these functions. Execution or direct activities, which are not so evidently those of an administrator, accounted for nearly two-thirds (65%) of the total time. Education or teaching activities required less than 5%.

The distribution of activities and time is further examined in Table 5.

Figure 9.

ACTIVITIES BY LEVEL

Percent Distribution

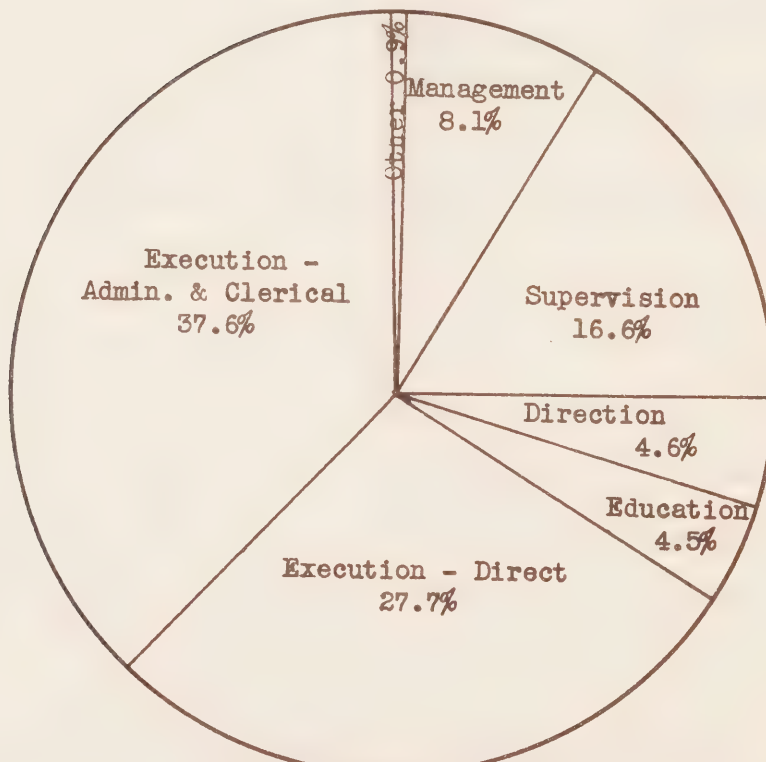


100% = 14,028 Activities

Figure 10.

ACTIVITY TIME BY LEVEL

Percent Distribution



100% = 28,800 Intervals

Table 5

Distribution of Activities by Level in Major Areas

A. Number of Activities

Level	Patient Care P	Ward Admin. H	Personnel Admin. S	T o t a l
100 Management	669	155	57	881
S Supervision	2,083	309	37	2,429
D Direction	745	208	17	970
400 Education	296	-	70	366
Execution				
500 Direct	2,362	1,048	642	4,052
600 Admin. & Clerical	4,293	325	487	5,105
T o t a l	10,448	2,045	1,310	14,028*

B. Duration of Activities (Intervals)

Level	Patient Care P	Ward Admin. H	Personnel Admin. S	T o t a l
100 Management	1,813	317	189	2,319
S Supervision	4,144	564	68	4,776
D Direction	1,025	291	24	1,340
400 Education	614	-	675	1,289
Execution				
500 Direct	4,939	1,871	1,182	7,992
600 Admin. & Clerical	9,323	592	902	10,817
T o t a l	21,858	3,635	3,040	28,800*

C. Percent Distribution of Total Time

Level	Patient Care P	Ward Admin. H	Personnel Admin. S	T o t a l
100 Management	6.30	1.10	0.66	8.05
S Supervision	14.39	1.96	0.24	16.58
D Direction	3.56	1.01	0.08	4.65
400 Education	2.13	-	2.34	4.48
Execution				
500 Direct	17.15	6.50	4.10	27.75
600 Admin. & Clerical	32.37	2.06	3.13	37.56
T o t a l	75.90	12.62	10.56	100.00*

D. Percent Distribution of Time Within Areas

Level	Patient Care P	Ward Admin. H	Personnel Admin. S	T o t a l
100 Management	8.29	8.72	6.22	8.05
S Supervision	18.96	15.52	2.24	16.58
D Direction	4.69	8.01	0.79	4.65
400 Education	2.81	-	22.20	4.48
Execution				
500 Direct	22.60	51.47	38.88	27.75
600 Admin. & Clerical	42.65	16.29	29.67	37.56
T o t a l	100.00	100.01	100.00	100.00*

* Includes "other" activities; 225 activities, duration 267 intervals.

The assessment of head nurse activities seems to revolve largely around the relationship of the combined Management-Supervision-Direction group to the Execution activities. Can the latter be reduced to allow more time for the Management and related activities? In order to answer this question, we must take a closer look at the data. In Table 5 we can compare the level of activity within the areas. The bulk of the Management-Supervision-Direction is in the Patient Care area. These activities in Ward and Personnel Administration amounted to only about 5% of the total time. The largest amount of Execution time is also in the Patient Care area. Specifically, the head nurse spent about one-third of the total time in carrying on herself, administrative and clerical activities concerning Patient Care. In the other areas, administrative and clerical activities are not as important as direct Execution functions.

Major Groups and Specific Activities

The groups of closely related activities, identified by the tens digits in the code, provide convenient and informative categories. None of the groups are very outstanding but those accounting for 1% or more of the total time are listed in Table 6.* These 25 groups together took up nearly three-quarters of the total observation time. Leading groups are seen to be those concerned with giving, receiving and recording information about patients; writing orders and making arrangements for services outside the unit; and observing and recognizing symptoms, conditions and causes. Patient Care activities predominate.

That there was a great diversity of activity is also indicated by enumeration of the specific activities, those identified by individual

* The full classification of activities is given in Appendix E.

Table 6
Major Activity Groups*

Rank	Code No.	Description	No. Activities	Time	
				No. Intervals	% Total Time
1	P.680-9	Giving information re patient.....	799	2,189	7.60
2	P.660-9	Writing orders and making arrangements re services involving persons not on unit staff.	685	1,852	6.43
3	P.500-9	Observing and recognizing symptoms, conditions and causes.....	941	1,655	5.75
4	P.630-9	Recording information re patient.....	678	1,614	5.60
5	P.610-9	Receiving information re patient.....	888	1,546	5.37
6	P.510-9	Assisting physician in examining patients, giving treatments and making diagnostic tests	253	1,014	3.52
7	P.560-9	Direct care for patient's well-being.....	491	907	3.15
8	H.520-9	Securing, maintaining, storing and distributing supplies and equipment.....	549	896	3.11
9	P.530-9S	Supervising the preparing and administering of drugs and medications, diets and test meals..	388	859	2.98
10	P.120-9	Planning and co-operation re the care of patients.....	422	821	2.85
11	P.650-9	Writing orders, directions, and assignments for unit staff re medications, diets, etc....	278	748	2.60
12	P.660-9S	Supervising the writing of orders and arrangements re services involving persons not on unit staff.....	348	732	2.54
13	H.510-9	Creating and maintaining proper physical environment.....	348	627	2.18
14	P.130-9	Organization of nursing care.....	128	620	2.15
15	P.600-9	Receiving orders from medical staff.....	374	567	1.97
16	S.520-9	Maintaining good relationships with hospital staff.....	369	564	1.96
17	P.550-9S	Supervising the carrying out of special nursing procedures.....	266	544	1.89
18	P.570-9	Care on behalf of patient (unit, possessions, and other interests).....	286	512	1.78
19	S.430-9	Using opportunities to improve own knowledge and abilities.....	18	496	1.72
20	P.670-9	Assembling and maintaining information re patients.....	388	489	1.70
21	P.640-9S	Supervising the recording of administration of medications, treatments, diets, narcotics and alcohol.....	102	420	1.46
22	P.620-9S	Supervising the direct recording of symptoms, conditions, causes.....	221	408	1.42
23	P.530-9	Preparing and administering drugs and medications, diets, test meals.....	162	370	1.28
24	P.410-9	Advising patient regarding illness and treatment.....	132	303	1.05
25	S.530-9	Exchanging information with hospital staff re hours of duty, assignments.....	220	291	1.01
		Total Major Activity Groups.....	9,734	21,044	73.07
		Total All Activity Groups.....	14,028	28,800	100.00

* Activity Groups, identified by tens digit number, accounting for 1% or more of total time, ranked in descending order of time involved.

(Groups do not include Supervision or Direction unless specified S or D)

Table 7

Major Specific Activities*

A. Activities Occurring Most Frequently

Rank	Code No	Activity Description	Activities		Time (Intervals)
			No.	%	
1	P.501	Observing and recognizing general symptoms and conditions.....	499	3.56	867
2	P.566	Mental hygiene of patient.....	385	2.74	724
3	P.502	Observing and recognizing symptoms and conditions of disease.....	341	2.43	647
4	P.681	Giving information re patient to medical staff.....	320	2.28	548
5	H.528	Securing, distributing and storing office supplies on the ward.....	304	2.17	392
6	P.612	Receiving information re patient from nursing staff.....	292	2.08	409
7	P.682	Giving information re patient to nursing staff.....	265	1.89	414
8	P.633	Making kardex entries.....	244	1.74	557
9	S.523	Incidental conversation with hospital personnel.....	241	1.72	405
10	S.641	Looking for staff.....	225	1.60	380
11	P.602	Reading doctor's standing orders or prescriptions.....	221	1.58	325
12	P.532S	Supervising the administering of drugs and medications.....	217	1.55	501
13	P.123	Planning with nursing staff for care of patients.....	202	1.44	345
14	P.671	Filing records.....	200	1.43	246
15	P.615	Receiving information re patients from patient's records.....	197	1.40	322
16	P.121	Planning with the medical staff for the care of patients.....	196	1.40	437
17	P.513	Accompanying physicians on rounds to patients.....	165	1.18	500
18	P.664	Writing orders for services involving laboratory procedures.	162	1.15	550
19	H.526	Securing, distributing and storing nursing supplies on the ward.....	162	1.15	356
20	P.651	Writing orders, directions and assignments for unit staff re medications (incl. medicine cards)	158	1.13	395
21	P.685	Giving report re patients to nursing staff.....	146	1.04	1,091
22	P.634	Making out day and night reports..	145	1.03	531
		Total Major Activities.....	5,287	37.69	10,942
		Total All Activities.....	14,028	100.00	28,800

* Activities each accounting for 1% or more of total activities ranked in descending order of number of activities.

Table 7

Major Specific Activities*

B. Activities Taking Most Time

Rank	Code No.	Activity Description	No. Activities	Time	
				No. Intervals	% Total Time
1	P.685	Giving report re patients to nursing staff.....	146	1,091	3.79
2	P.501	Observing and recognizing general symptoms and conditions.....	499	867	3.01
3	P.566	Mental hygiene of patient.....	385	724	2.51
4	P.502	Observing and recognizing symptoms and conditions of disease.....	341	647	2.25
5	P.133	Organizing the time of nursing personnel and the assignment of duties.....	121	603	2.09
6	P.633	Making kardex entries.....	244	557	1.93
7	P.664	Writing orders for services involving laboratory procedures.....	162	550	1.91
8	P.681	Giving information re patient to medical staff..	320	548	1.90
9	P.634	Making out day and night reports.....	145	531	1.84
10	P.532S	Supervising the administering of drugs and medications.....	217	501	1.74
11	P.513	Accompanying physicians on rounds to patients...	165	500	1.74
12	S.433	Attending staff conferences.....	3	453	1.57
13	P.121	Planning with the medical staff for the care of patients.....	196	437	1.52
14	P.682	Giving information re patient to nursing staff..	265	414	1.44
15	P.612	Receiving information re patient from nursing staff.....	292	409	1.42
16	S.523	Incidental conversation with hospital personnel.	241	405	1.41
17	P.651	Writing orders, directions and assignments for unit staff re medications (incl. medicine cards).....	158	395	1.37
18	H.528	Securing, distributing and storing office supplies on the ward.....	304	392	1.36
19	S.641	Looking for staff.....	225	380	1.32
20	H.526	Securing, distributing and storing nursing supplies on the ward.....	162	356	1.24
21	P.123	Planning with nursing staff for care of patients	202	345	1.20
22	P.663	Writing orders and requisitions for medications (from pharmacy).....	139	341	1.18
23	P.642S	Supervising the recording of administration of narcotics and alcohol.....	58	338	1.17
24	P.602	Reading doctor's standing orders or prescriptions.....	221	325	1.13
25	P.615	Receiving information re patients from patient's records.....	197	322	1.12
26	P.662	Writing orders for services involving blood team or blood Bank.....	121	321	1.11
		Total Major Activities.....	5,529	12,752	44.28
		Total All Activities.....	14,028	28,800	100.00

* Activities each accounting for 1% or more of total time, ranked in descending order of amount of time involved.

code numbers. No one or two activities stand out above all others, but some are relatively more important and these are listed in Table 7. The criterion of selection in Table 7A and B has been 1% or more of the total activities and of the total time, respectively. The 26 activities included in Table 7B account for only 44% of the total time.

The most common Management activities, as indicated in Tables 6 and 7, concern the planning and organizing of patient care, particularly planning with the medical and nursing staffs (P.121, 123) and arranging for the assignment of duties of nursing personnel. The latter (P.133) mostly involved the preparation of rotation and clinical assignment schedules. Supervisory activities were directed particularly towards the administration of drugs and medications, especially narcotics and alcohol; the carrying out of special nursing procedures; the recording of symptoms, conditions and causes; and making arrangements for services not provided by unit staff.

Education or teaching activities involved the patient on the one hand and the head nurse herself on the other. The former consisted chiefly of advising the patient about his illness and treatment. The head nurse used opportunities to improve her own knowledge and abilities; the bulk of time in this connection was spent in attending staff meetings (S.433).

Most of the prominent activities, however, are in the "Execution" category. One large aggregate relates to the giving and receiving of information about patients. The activity taking most time of all (P.685) is of this type and consists mainly of giving day and night reports.

Another considerable series involves the recording and assembling of information about patients and the writing of orders and making arrangements for services. This whole group represents time spent on "paper work" in connection with Patient Care and accounts for over 15% of the time. Some examples from the records are: making kardex entries; writing orders for medications; arranging for blood team or for laboratory or pharmacy services. In addition, time is spent in supervising and directing such activities.

Considerable time was also taken up by functions related to the care of the patient, his interests and environment. One of the most important of these activities has been called "mental hygiene of the patient" (P.566). The following excerpts from the records indicate the type of activity included under this classification:

"tells patient nice to see sitting out of bed - discusses going home";
"tells patient she looks like million dollars with make-up on";
"tells patient 'good reports'";
"asks patient if better than this A.M. - does she want a book".

The two most common and most time-consuming activities in the Ward Administration area involve the handling of nursing and office supplies on the ward. This whole group of activities (H.520-529) is a major one from the standpoint of time involved, about 3% of the total. The possibility that these might be activities that could be carried on by other members of the staff seems borne out by examination of the entries on the activity records, such as the following:

H.526: 1) gets I.V. set
2) brings pad from room to utility room
3) gets tube, puts away basin, sorts fomentation flannels
4) gets rubber gloves and lubricant

- H.528:
- 1) gets slips
 - 2) gets kardex
 - 3) puts away requisitions and kardex
 - 4) gets chart
 - 5) carries chair (in corridor)
 - 6) gives the student the keys
 - 7) receives keys

It is of some interest also to note the activities which on particular occasions took a relatively long time, such as five minutes or more, in contrast to the average duration of half-a-minute. There were 27 different activities among the 51 activities lasting five minutes or longer. These are shown in Table 8. All but 4 of the 51 occasions were between 5 and 10 minutes duration. The longest two (S.433) involved attendance at a staff meeting. Another extended period was taken up in staff discussion (S.514), while the fourth, lasting just over 10 minutes, was a matter of giving the day and night reports (P.685). Thus the staff was involved in all four, although one also concerned patient care. The total time spent in activities lasting 5 minutes or longer was 1,751 intervals, a little over 7 hours, or about 6% of the total observation time.

Table 8

Number and Duration of Activities Lasting 5 Minutes or Longer

Code No.	Activity	Frequency	Total Time	Durations * (Intervals)
P.114	Assessing the supplies of drugs and medicines against the patient requirements	1	21	21
P.133	Organizing the time of nursing personnel and the assignment of duties	5	168	27,30,35,37,39
P.511	Assisting physician with treatments	2	49	24,25
P.512	Assisting physician with examinations, tests, specimens	1	22	22
P.531	Measuring drugs (pouring) (preparing hypos)	2	42	20,22
P.532S	Supervising the administration of drugs & medications	1	28	28
P.557S	Supervising the carrying out of preoperative preparations (including sterile preps.)	1	36	36
P.618	Receiving information re patients from nursing staff -- day and night reports	1	21	21
P.634	Making out day and night reports	2	47	22,25
P.642S	Supervising the recording of administration of narcotics and alcohol	4	83	20,20,21,22
P.654	Writing orders, directions and assignments for unit staff re special services for patients	1	25	25
P.662	Writing orders or requisitions and making arrangements re blood team or blood bank	1	21	21
P.664	Writing orders or requisitions and making arrangements re laboratory procedures	1	21	21
P.667	Writing orders or requisitions and making arrangements re special duty nurse	1	22	22
P.668	Writing orders or requisitions and making arrangements re diet	1	27	27
P.685	Giving information re patient to nursing staff -- day and night reports	13	343	20(4),21,23,25,26,28,31,33(2), 43
H.514	Care of utensils and supplies	1	23	23
H.526	Securing, distributing and storing nursing supplies on the ward	1	20	20
H.533S	Supervising the checking of laundry and linen	1	22	22
H.611S	Supervising the making out of daily census report	1	20	20
S.170	Planning social activities involving staff participation	1	31	31
S.433	Attending staff administrative conferences	2	448	208, 240
S.514	Discussing complaints and criticisms with individual staff members	1	67	67
S.523	Incidental conversation with hospital personnel	1	36	36
S.542	Orientation of staff re ward layout and services	1	33	33
S.544	Orientation of staff re patient characteristics (including introductions)	2	49	49
S.631	Working with time sheet	1	26	26
27		51	1,751	intervals or 7 hrs. approx.

* Intervals are 15 sec.; thus 20 intervals -- 5 minutes and 200 intervals - 50 minutes
40 " -10 " 240 " - 60 "
60 " -15 "

3. Related Factors - Location, Contacts, Equipment and Supplies

As already pointed out, it was considered that an adequate description of an activity should include reference to the place the activity occurred and any persons, equipment or procedures involved. Data respecting these factors are shown in Tables 9 to 12, and Figures 11-13; some pertinent comments are given below.

Location

The head nurse spent most of her time (60%) in the nursing station, (Table 9). She was at her own desk or the charting desk for half this period. Time spent at the medicine cabinet or cupboard was also considerable.

For nearly one-quarter of the time the head nurse was in patients' rooms or wards. The fact that about 5% of the time was spent in service rooms seems of importance, as is the similarly appreciable portion of time in corridors, stairways, and other such areas.

Some information is available respecting the average length of time a head nurse stayed in one place. The mean duration was about 5.6 intervals or less than $1\frac{1}{2}$ minutes. The median was about 3 minutes, so that half her stays were for three minutes or less. Thus, the head nurse was not only engaged in many activities of very short duration but she was moving about from place to place every two or three minutes.

ACTIVITY TIME BY LOCATION

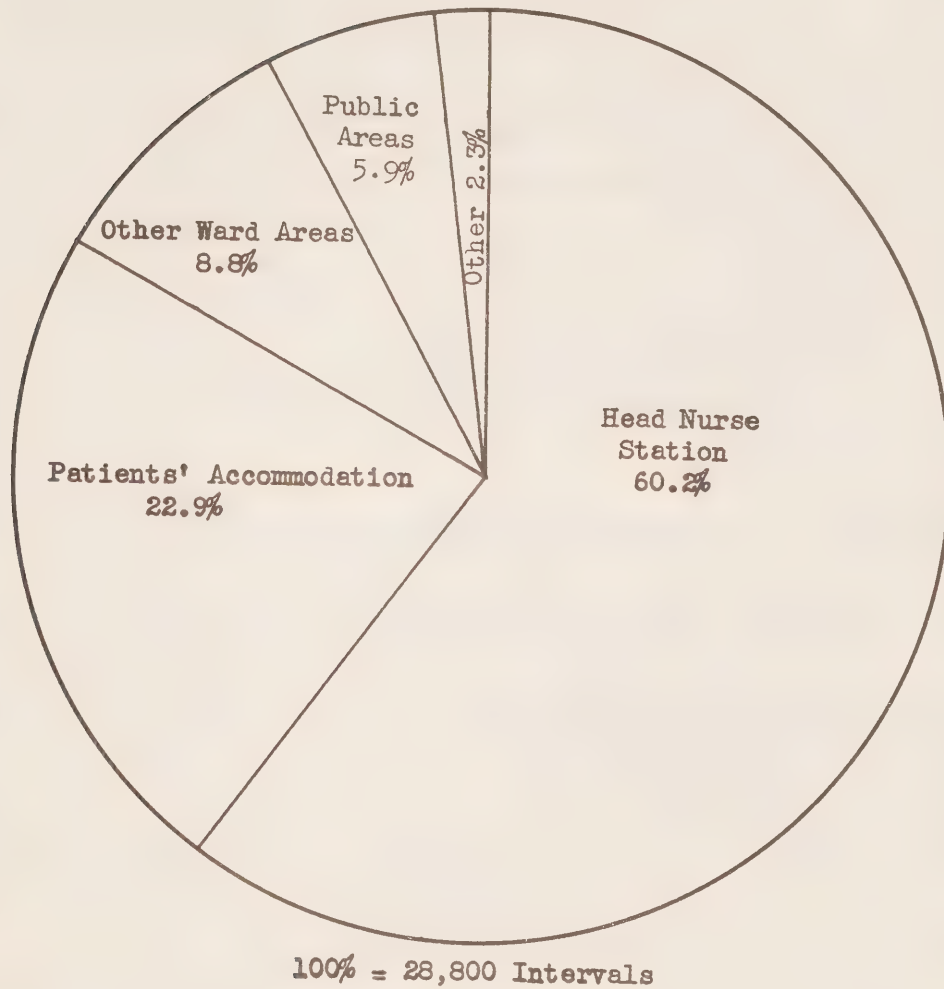


Figure 11. Percent Distribution of Time by Location of Head Nurse

Head Nurse Study: Data from Table 9.

Table 2

Distribution of Time According to Location

Location Code No.	Description	No. of Time Intervals	% Total Time
1	Head Nurse desk	4,304	14.94
2	Student Nurse desk (alcove or counter)	200	0.69
3	Ward Clerk desk	720	2.50
4	Nursing Supervisor's desk	14	0.05
5	Charting desk	4,133	14.35
6	Chart rack	210	0.73
7	Bulletin board	129	0.45
8	Blackboard	42	0.15
9	Nurses' Station (unspecified)	5,857	20.34
11	Medicine cabinet (or cupboard)	1,232	4.28
12	Narcotics drawer (or cupboard)	12	0.04
13	Drug table	27	0.09
14	Interne desk	13	0.05
19	Rail	448	1.56
1-19	T o t a l - Head Nurse Station	17,341	60.21
21-26	Service Rooms	1,459	5.07
32-33	Treatment room and dressing room	1,079	3.75
41	Private accommodation	1,663	5.77
42	Semi-Private accommodation	3,103	10.77
43	Public accommodation	1,181	4.10
44	Pediatric accommodation	559	1.94
45	Recovery room	26	0.09
46	Bathroom	54	0.19
41-46	T o t a l - Patients' Accommodation	6,586	22.87
51-59	Public areas - corridor, stairways, etc.	1,665	5.78
61-66	Areas outside the ward, e.g., offices, library, etc.	670	2.33
	GRAND TOTAL	28,800	100.00

Contacts

In Table 10 it should first be noted that the head nurse is dealing with other people for nearly two-thirds of her time and is alone less than one-third. The patients took more of the head nurse's time (16%) than did any other single category. Other major contacts are with the medical and nursing staffs, about 12% and 34% of the time, respectively. The proportion of time involving auxiliary staff is perhaps not as large as might be anticipated, about 5% in all, most of it with the ward clerk.

Telephone Contacts

Some of the contacts referred to above were by telephone; these accounted for $5\frac{1}{2}\%$ of the time involving contacts and less than 4% of the total time (Table 11). The main telephone conversations, as might be expected, were with other services and departments in the hospital. Considerable time was also spent in dealing by telephone with the medical and administrative staffs. Telephone conversation with visitors, clergy, and others amount to only about one-half hour in all.

Forms, Equipment and Supplies

During 60% of the observation period the head nurse's activities involved equipment and supplies of various kinds (Table 12). This included dealing with forms, the "paper-work" of which we hear a great deal and which was referred to above. Such activities accounted for a large part (40%) of the total time. Most of the forms concerned the medical and nursing care of patients. Equipment and supplies were involved in activities taking one-fifth of the total time. As will be seen from Table 12, this time was nearly equally divided between treatment and other supplies.

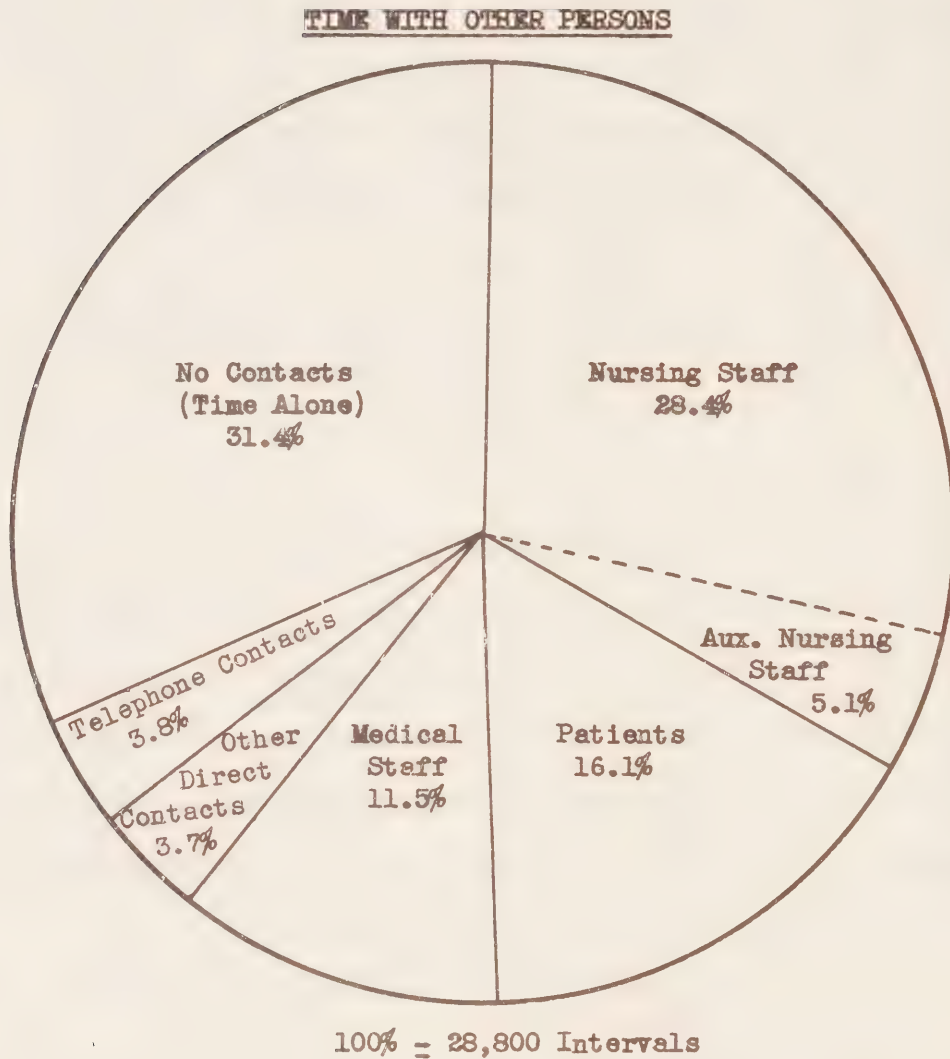


Figure 12. Percent Distribution of Time Spent in Activities Involving Other Persons

Table 10

Distribution of Time Involving Contacts* with Other Persons

Persons Code No.	Description	No. of Time Intervals	% Total Time
0-9	Hospital administration staff	287	1.00
10-14	Medical staff	3,471	12.05
15-19	D.V.A. staff	49	0.17
20-29	Nursing, administration staff	657	2.28
30-39	Nursing, school staff	296	1.03
40	Supervisor (Vets. Pav.)	183	0.64
41	Supervisor	236	0.82
42	Head Nurse	123	0.43
43	Assistant Head Nurse	644	2.24
44	General Staff Nurse	2,333	8.10
45	Special Nurse (private duty)	314	1.09
46	Student nurses	2,347	8.15
49	Staff (unspecified)	1,186	4.12
40-49	T o t a l - Nursing staff (excl. admin. & school)	7,366	25.58
51	Ward clerk	908	3.15
52	Ward aide	202	0.70
53	Orderly	316	1.10
54	Attendant (psychiatry)	-	-
59	Staff (unspecified)	42	0.15
50-59	T o t a l - Nursing staff (auxiliary)	1,468	5.10
60-79	Other services and departments	666	2.32
80-89	Housekeeping staff	110	0.38
90-94	Maintenance staff	27	0.09
95	Patients	4,663	16.19
96-99	Other contacts (visitors, clergy, etc.)	665	2.31
100	Personal contacts	16	0.06
101	Outside agencies	21	0.07
	Total Time Involving Contacts	19,762	68.62
	Time Spent Alone (No Contacts)	9,038	31.38
	Grand Total	28,800	100.00

* Including contacts by telephone 1,087 intervals. (See Table 11.)

Table 11

Distribution of Time Involving Direct and Telephone Contacts

Persons Code No.	Description	Direct Contacts		Telephone Contacts		Total Contacts (Intervals)
		Intervals	% Grand Total	Intervals	% Group Total	
0-9	Hospital administration	83	0.3	204	71.1	287
10-14	Medical staff	3,314	11.5	157	4.5	3,471
15-19	D.V.A. officials	34	0.1	15	30.6	49
20-29	Nursing - administration	552	1.9	105	16.0	657
30-39	Nursing - school	296	1.0	-	-	296
40-49	Nursing - general	7,345	25.5	21	0.3	7,366
50-59	Nursing - auxiliary	1,463	5.1	5	0.3	1,468
60-79	Other services and departments	269	0.9	397	59.6	666
80-89	Housekeeping staff	105	0.4	5	4.5	110
90-94	Maintenance staff	24	0.1	3	11.1	27
95	Patients	4,649	16.1	14	0.3	4,663
96-99	Others	540	1.9	125	18.8	665
100	Personal	-	-	16	100.0	16
101	Outside agencies	1	...	20	95.2	21
	T o t a l	18,675	64.8	1,087	5.5	19,762
	<u>Summary:</u>	<u>Intervals</u>	<u>% Grand Total</u>			
	Direct contacts	18,675	64.8			
	Telephone contacts	1,087	3.8			
	No contacts	<u>9,038</u>	<u>31.4</u>			
	Grand Total	28,800	100.0			

... Less than 0.05%.

TIME WITH FORMS, EQUIPMENT AND SUPPLIES

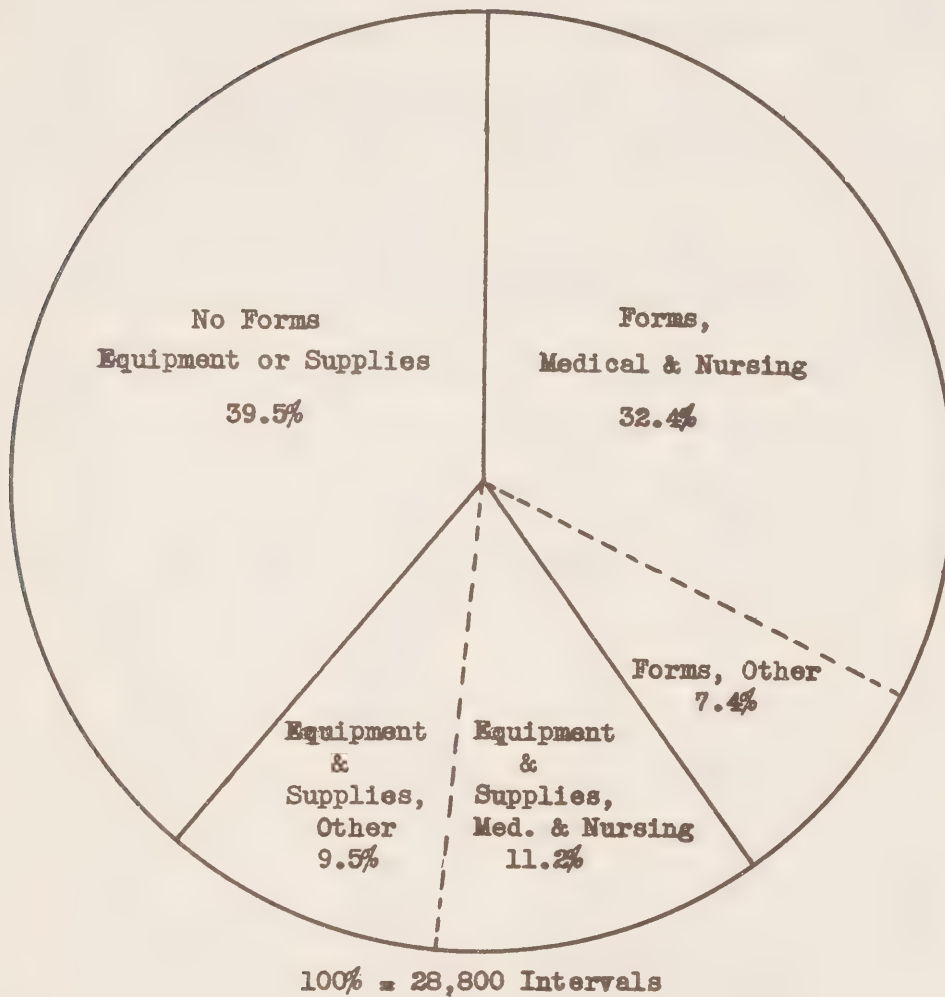


Figure 13. Percent Distribution of Time in Activities Involving Forms, Equipment & Supplies

Table 12
Distribution of Time Involving Forms, Equipment and Supplies

Equipment & Supply Code No.	D e s c r i p t i o n	No. of Time Intervals	% Total Time	% Time Involving Forms, Equip. & Supplies
012-013	Equipment & supplies, administration	1,841	6.39	10.56
022-027	Equipment & supplies, medical & nursing (treatment)	3,224	11.19	18.50
032-035	Equipment & supplies, maintenance & housekeeping	888	3.08	5.09
Total	Equipment and Supplies	5,953	20.67	34.16
101-109	Forms, hospital administration of patient movement	317	1.10	1.82
110-119	Forms, hospital administration of patient care	105	0.36	0.60
120-129	Forms, staff administration	957	3.32	5.49
Total	Forms, administration	1,379	4.79	7.91
200-209	Forms, unit records of patient care	6,537	22.70	37.51
210-219	Forms, other departments' records of patient care	1,127	3.91	6.47
220-229	Forms, orders and records for medications	1,681	5.84	9.64
Total	Forms, medical and nursing (treatment)	9,345	32.45	53.62
301-307	Forms, dietary	443	1.54	2.54
310-314	Forms, supply requisitions (excl. medications)	301	1.05	1.73
319	Forms, other	8	0.03	0.05
Total	Forms, maintenance and housekeeping	752	2.61	4.31
	Total Forms, Equipment and Supplies	17,429	60.52	100.00
	No Forms, Equipment or Supplies Involved	11,371	39.48	
	Grand Total	28,800	100.00	

4. Period of the Day

In the daily routine of the hospital the head nurse has certain activities occurring at more or less regular times. Such responsibilities as reading the night report on patients to the nursing staff, and going on rounds with doctors will be normal activities in the early part of the day. The day report on patients is prepared in the late afternoon. Activities concerned with the arranging of patients' meals and diets will occur in short periods three times a day.

Although these activities were observed in anticipated times of the day, they were not carried on without interruption and, as demonstrated in Tables 13 to 14, there is relatively little variation in activity pattern from one period of the day to another. The average duration of an activity throughout the day is consistently about one-half minute, with a range of less than one interval.*

The proportion of time devoted to Patient Care activities was lower in the first period of the day and in the late afternoon. Ward Administration was most prominent in the hour from 4.30 to 5.30 P.M. Due largely to the attendance of two head nurses at a staff meeting which occupied most of the observation hour, Personnel Administration showed its highest proportion of time in the last hour of the day.

From the standpoint of level of activity, Management functions predominate in mid-morning (Period 3) and Supervision in the first hour of the day. Activities which could be classed as Direction seemed to consistently involve about 5% of the time throughout the day. Time spent in Education was most prominent in the last period due to the staff meeting already mentioned.

* See also Appendix D, pp.105, 108-9.

In the sixth period of the day, 3 to 4 P.M., Execution activities are relatively most important, but it is the Administration and Clerical activities not Direct Execution functions that account for this; in fact, the latter were less evident here than at other times. The explanation of this situation may be that at this time of day the head nurse is quite frequently off duty. As noted elsewhere (p. 112), the assistant head nurses and staff nurses who substitute for head nurses spent relatively more time in Execution - Administrative and Clerical activities than did the head nurses.

Table 13

A. Number, Duration¹ and Area of Activities by Period of the Day

Period	Area of Activity			Total Activities ²	Duration (Intervals)	
	Patient Care	Ward Admin.	Personnel Admin.		Total	Mean
1	1027	261	169	1477	3600	2.44
2	1468	194	182	1892	3600	1.90
3	1390	211	173	1802	3600	2.00
4	1380	286	190	1878	3600	1.92
5	1410	240	128	1802	3600	2.00
6	1228	204	177	1630	3600	2.21
7	1285	346	151	1817	3600	1.98
8	1260	303	140	1730	3600	2.08
All Periods	10448	2045	1310	14028	28800	2.05

B. Time Involved¹ in Activities by Area of Activity and Period

Period	Area of Activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
1	2593	524	459	3600
2	2912	286	349	3600
3	2892	343	332	3600
4	2794	466	313	3600
5	2851	489	225	3600
6	2867	324	384	3600
7	2544	736	281	3600
8	2405	467	697	3600
All Periods	21858	3635	3040	28800

C. Percent Time Involved in Activities by Area of Activity for Each Period

Period	Area of Activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
1	72.03	14.56	12.75	100.00
2	80.89	7.94	9.69	100.00
3	80.33	9.53	9.22	100.00
4	77.61	12.94	8.69	100.00
5	79.19	13.58	6.25	100.00
6	79.64	9.00	10.67	100.00
7	70.67	20.44	7.81	100.00
8	66.81	12.97	19.36	100.00
All Periods	75.90	12.62	10.56	100.00

¹ Duration and Time expressed in intervals of 15 seconds.

² Total includes 225 other activities amounting to 267 intervals.

Table 14

A. Number of Activities by Level of Activity and Period

Period	Level of Activity							Grand Total	
	Management	Supervision	Direction	Education	Execution				Other
					Direct	Admin. & Clerical	Total		
1	99	296	102	27	423	510	933	20	1477
2	120	267	105	77	633	642	1275	48	1892
3	158	276	123	43	478	696	1174	28	1802
4	114	314	143	37	494	754	1248	22	1878
5	90	303	130	48	541	666	1207	24	1802
6	80	351	119	25	306	728	1034	21	1630
7	123	316	114	41	555	633	1188	35	1817
8	97	306	134	68	622	476	1098	27	1730
All Periods	881	2429	970	366	4052	5105	9157	225	14028

B. Time Involved* in Activities by Level of Activity and Period

Period	Level of Activity							Grand Total	
	Management	Supervision	Direction	Education	Execution		Other		
					Direct	Admin. & Total Clerical			
1	264	822	132	55	797	1506	2303	24	3600
2	271	542	155	153	1227	1199	2426	53	3600
3	593	479	176	99	1008	1212	2220	33	3600
4	300	572	203	90	984	1424	2408	27	3600
5	220	546	175	104	1087	1433	2520	35	3600
6	165	643	163	72	620	1912	2532	25	3600
7	336	619	160	95	1141	1210	2351	39	3600
8	170	553	176	621	1128	921	2049	31	3600
All Periods	2319	4776	1340	1289	7992	10817	18809	267	28800

C. Percent Time Involved in Activities by Level of Activity for Each Period

Period	Level of Activity								Grand Total
	Management	Supervision	Direction	Education	Execution			Other	
					Direct	Admin.& Clerical	Total		
1	7.33	22.83	3.67	1.53	22.14	41.83	63.97	0.67	100.00
2	7.53	15.06	4.31	4.25	34.08	33.31	67.39	1.47	100.00
3	16.47	13.31	4.89	2.75	28.00	33.67	61.67	0.92	100.00
4	8.33	15.89	5.64	2.50	27.33	39.56	66.89	0.75	100.00
5	6.11	15.17	4.86	2.89	30.19	39.81	70.00	0.97	100.00
6	4.58	17.86	4.53	2.00	17.22	53.11	70.33	0.69	100.00
7	9.33	17.19	4.44	2.64	31.69	33.61	65.31	1.08	100.00
8	4.72	15.36	4.89	17.25	31.33	25.58	56.92	0.86	100.00
All Periods	8.05	16.58	4.65	4.48	27.75	37.56	65.31	0.93	100.00

* Time expressed in Intervals of 15 seconds.

5. Differences in Head Nurse Activity Pattern

The Study was designed to obtain the overall characteristic pattern of the activities of the head nurse in a general hospital. This has now been **described**. While the Study was not intended specifically to measure and evaluate differences in activity pattern -- such as those between head nurses and between wards, some interesting and useful information was of course obtained as a consequence of the comprehensive nature of the records.

That there are differences in head nurses is evident from a simple examination of tabulations of data for each head nurse. The frequency and duration of activities and the pattern indicated in the distribution of activities by area and level are shown in Tables 15 to 17 and summarized in Figures 14 and 15. All head nurses had mean activity durations between 1.88 and 2.60 intervals, i.e., within one-quarter minute. Thus, there is no difference of practical importance in the average duration of activities. The consistency of this aspect of the head nurse's activity, already referred to as an important observation, is seen to hold even in relation to individual head nurses operating under quite different circumstances.

One might expect that the variations in the pattern of the activities of the head nurses would be a reflection of differences in the characteristics of the wards. These will include the status of the ward, the type and sex of the patients, and the patient load (as indicated by indices such as beds occupied, patient/staff ratio, and turnover). In addition, wards in the veterans' pavilion in the hospital differ from others in that they have graduate nurses only, no student nurses.*

* Another factor of importance is the status of nurse actually observed. This is considered in Appendix D-1.

Figure 14. PERCENT TIME IN ACTIVITIES BY AREA FOR EACH HEAD NURSE

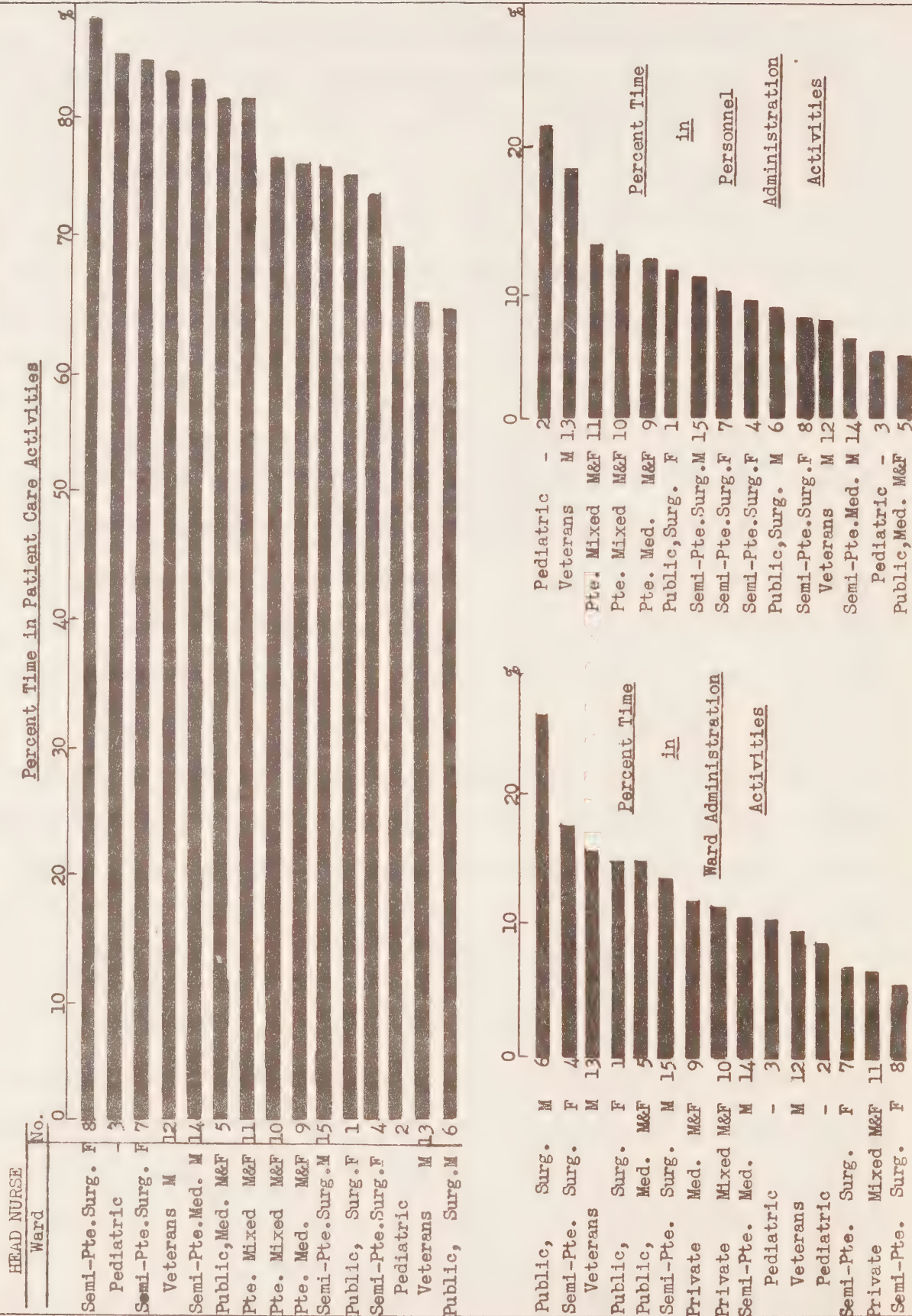


Figure 15. PERCENT TIME IN ACTIVITIES BY LEVEL FOR EACH HEAD NURSE

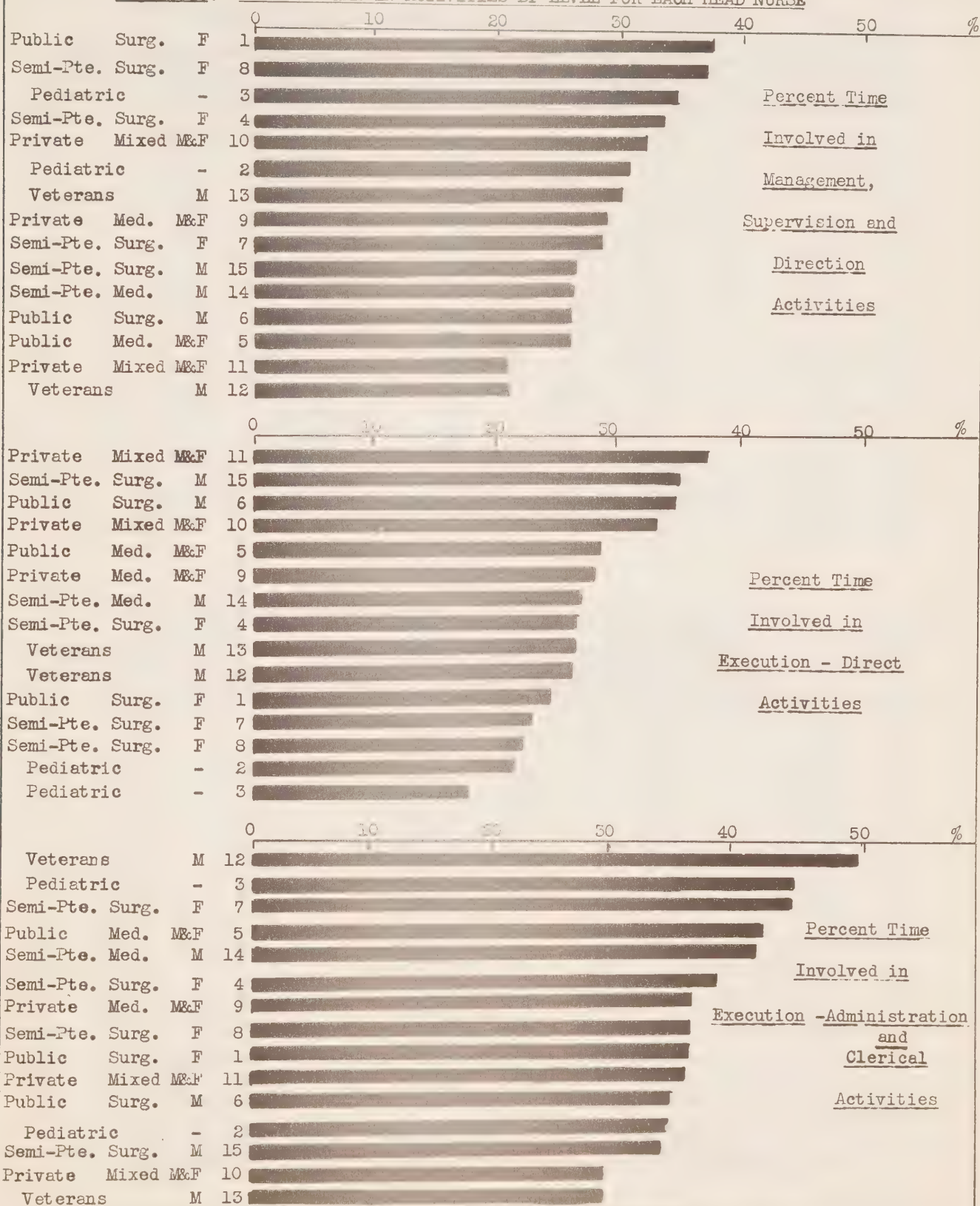


Table 15

Number and Duration of Activities by Head Nurse

Head Nurse No.	No. Activities	Duration ¹ (Intervals)	
		Total	Mean
1	987	1,920	1.95
2	810	1,920	2.37
3	931	1,920	2.06
4	988	1,920	1.94
5	1,023	1,920	1.88
6	947	1,920	2.03
7	968	1,920	1.98
8	988	1,920	1.94
9	958	1,920	2.00
10	960	1,920	2.00
11	957	1,920	2.01
12	827	1,920	2.32
13	739	1,920	2.60
14	1,000	1,920	1.92
15	945	1,920	2.03
Total	14,028	28,800	2.05

Table 16

A. Activities by Area of Activity for Each Head Nurse

Head Nurse No.	Area of activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
1	706	183	89	987
2	627	85	87	810
3	723	122	67	931
4	667	203	109	988
5	774	184	55	1,023
6	627	209	88	947
7	768	92	99	968
8	819	76	75	988
9	683	145	109	958
10	701	135	106	960
11	715	86	138	957
12	623	105	83	827
13	529	131	64	739
14	792	126	66	1,000
15	694	163	75	945
Total	10,448	2,045	1,310	14,028

¹ Duration and Time expressed in Intervals of 15 seconds.

² Total includes 225 other activities amounting to 267 intervals.

Table 16

B. Time Involved¹ in Activities by Area of Activity for Each Head Nurse

Head Nurse No.	Area of Activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
1	1,407	292	209	1,920
2	1,305	170	428	1,920
3	1,598	206	96	1,920
4	1,388	350	171	1,920
5	1,531	290	89	1,920
6	1,213	511	167	1,920
7	1,586	139	183	1,920
8	1,643	112	146	1,920
9	1,433	235	229	1,920
10	1,438	224	238	1,920
11	1,519	129	252	1,920
12	1,574	189	138	1,920
13	1,227	306	369	1,920
14	1,570	211	118	1,920
15	1,426	271	207	1,920
Total	21,858	3,635	3,040	28,800

C. Percent Time Involved in Activities by Area of Activity for Each Head Nurse

Head Nurse No.	Area of Activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
1	73.28	15.21	10.89	100.00
2	67.97	8.85	22.29	100.00
3	83.23	10.73	5.00	100.00
4	72.29	18.23	8.91	100.00
5	79.74	15.10	4.64	100.00
6	63.18	26.61	8.70	100.00
7	82.60	7.24	9.53	100.00
8	85.57	5.83	7.60	100.00
9	74.64	12.24	11.93	100.00
10	74.90	11.67	12.40	100.00
11	79.11	6.72	13.12	100.00
12	81.98	9.84	7.19	100.00
13	63.91	15.94	19.22	100.00
14	81.77	10.99	6.15	100.00
15	74.27	14.11	10.78	100.00
Total	75.90	12.62	10.56	100.00

¹ Duration and Time expressed in Intervals of 15 seconds.

² Total includes 225 other activities amounting to 267 intervals.

Table 17

A. Activities by Level of Activity for Each Head Nurse

Head Nurse No.	Level of Activity							Other	Grand Total
	Management	Supervision	Direction	Education	Execution				
					Direct	Admin.& Clerical	Total		
1	86	174	86	15	268	349	617	9	987
2	71	129	60	17	218	304	522	11	810
3	53	217	53	20	198	371	569	19	931
4	68	188	73	7	284	359	643	9	988
5	45	186	56	22	310	394	704	10	1,023
6	44	175	54	28	315	308	623	23	947
7	60	166	76	31	229	397	626	9	968
8	58	219	81	34	241	337	578	18	988
9	71	136	85	36	307	302	609	21	958
10	61	194	71	28	315	273	588	18	960
11	33	130	67	30	351	328	679	18	957
12	54	100	28	14	222	393	615	16	827
13	57	122	57	10	211	267	478	15	739
14	62	147	64	36	278	397	675	16	1,000
15	58	146	59	38	305	326	631	12	945
Total	881	2,429	970	366	4,052	5,105	9,157	225	14,028

B. Time Involved* in Activities by Level of Activity for Each Head Nurse

Head Nurse No.	Level of Activity							Other	Grand Total
	Manage-ment	Super-vision	Direction	Education	Execution				
					Direct	Admin.& Clerical	Total		
1	271	335	114	26	474	688	1,162	12	1,920
2	298	219	79	238	416	653	1,069	17	1,920
3	142	451	70	39	343	855	1,198	20	1,920
4	175	375	90	11	520	738	1,258	11	1,920
5	92	337	70	43	555	813	1,368	10	1,920
6	119	310	74	52	672	664	1,336	29	1,920
7	126	315	104	76	442	845	1,287	12	1,920
8	152	442	112	69	435	691	1,126	19	1,920
9	171	271	118	98	547	692	1,239	23	1,920
10	130	388	101	76	645	560	1,205	20	1,920
11	72	228	99	108	717	676	1,393	20	1,920
12	120	228	50	39	511	953	1,464	19	1,920
13	145	344	82	262	515	554	1,069	18	1,920
14	133	278	94	74	527	793	1,320	21	1,920
15	173	255	83	78	673	642	1,315	16	1,920
Total	2,319	4,776	1,340	1,289	7,992	10,817	18,809	267	28,800

* Time expressed in Intervals of 15 seconds.

Table 17
C. Percent Time Involved in Activities by Level of Activity for Each Head Nurse

Head Nurse No.	Level of Activity							Grand Total	
	Management	Supervision	Direction	Education	Execution		Other		
					Direct	Admin.& Clerical			Total
1	14.11	17.45	5.94	1.35	24.69	35.83	60.52	0.63	100.00
2	15.52	11.41	4.11	12.40	21.67	34.01	55.68	0.89	100.01
3	7.40	23.49	3.65	2.03	17.86	44.53	62.40	1.04	100.00
4	9.11	19.53	4.69	0.57	27.08	38.44	65.52	0.57	99.99
5	4.79	17.55	3.65	2.24	28.91	42.34	71.25	0.52	100.00
6	6.20	16.15	3.85	2.71	35.00	34.58	69.58	1.51	100.00
7	6.56	16.41	5.42	3.96	23.02	44.01	67.03	0.63	100.01
8	7.92	23.02	5.83	3.59	22.66	35.99	58.65	0.99	100.00
9	8.91	14.11	6.15	5.10	28.49	36.04	64.53	1.19	99.99
10	6.77	20.21	5.26	3.96	33.59	29.17	62.76	1.04	100.00
11	3.75	11.87	5.16	5.62	37.34	35.21	72.55	1.04	99.99
12	6.25	11.87	2.60	2.03	26.61	49.64	76.25	0.99	99.98
13	7.55	17.92	4.27	13.65	26.82	28.85	55.68	0.94	100.00
14	6.93	14.48	4.90	3.85	27.45	41.30	68.75	1.09	100.00
15	9.01	13.28	4.32	4.06	35.05	33.44	68.49	0.83	99.99
Total	8.05	16.58	4.65	4.48	27.75	37.56	65.31	0.92	99.99

The difficulty in interpreting differences in activity pattern between head nurses in the light of these factors is that their effects cannot be isolated. It is of interest, however, to present the relevant data from the records as it adds to the picture of head nurse activities and demonstrates the type of information obtainable from studies of this kind. The data have been examined with these considerations in mind and are presented with some comments respecting relationships of particular interest or importance.

The distribution of activities by area and level for various categories of wards is given in tables in Appendix F, and is summarized graphically in Figures 16 and 17.

The important fact made clear by the four graphs and the accompanying tables is that the pattern of activity is surprisingly similar regardless of the head nurse's surroundings. The area and level relationships of activity time, already outlined, hold even when the wards are considered in groups according to their characteristics.

Thus, it can be seen from Figure 16 that for all categories of ward the bulk of the head nurses' time is spent on Patient Care. There is relatively little variation in this regard, the range being from 73 to 79%. The wards in which the highest proportion of time is spent on Patient Care are the semi-private, the medical wards, and wards having female patients. Considering individual wards, we note in Figure 14 that Wards 7 and 8 -- both of which are semi-private, surgical, female wards -- rank high in Patient Care time. These two wards share a supervisor. Does this arrangement result in head nurses spending relatively more time in Patient Care?

Figure 16. PERCENT TIME IN ACTIVITIES BY AREA FOR EACH CATEGORY OF WARD
Percent Time in Patient Care Activities

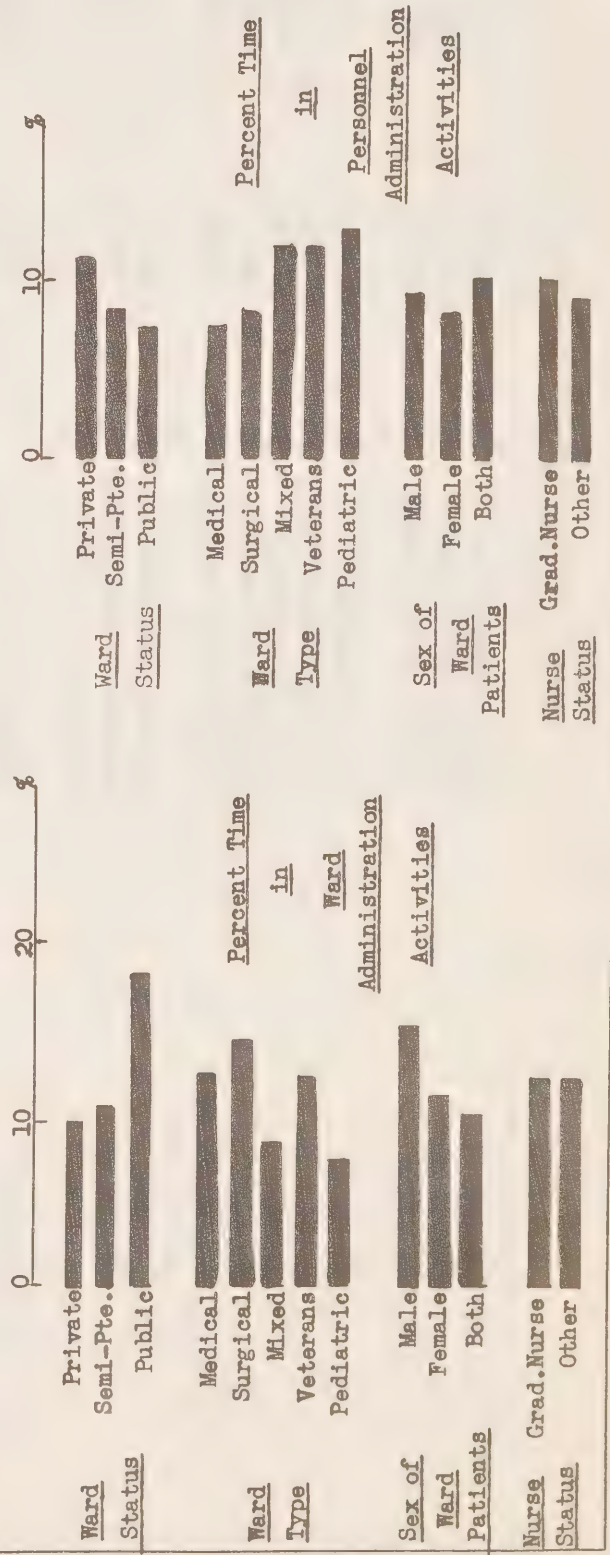
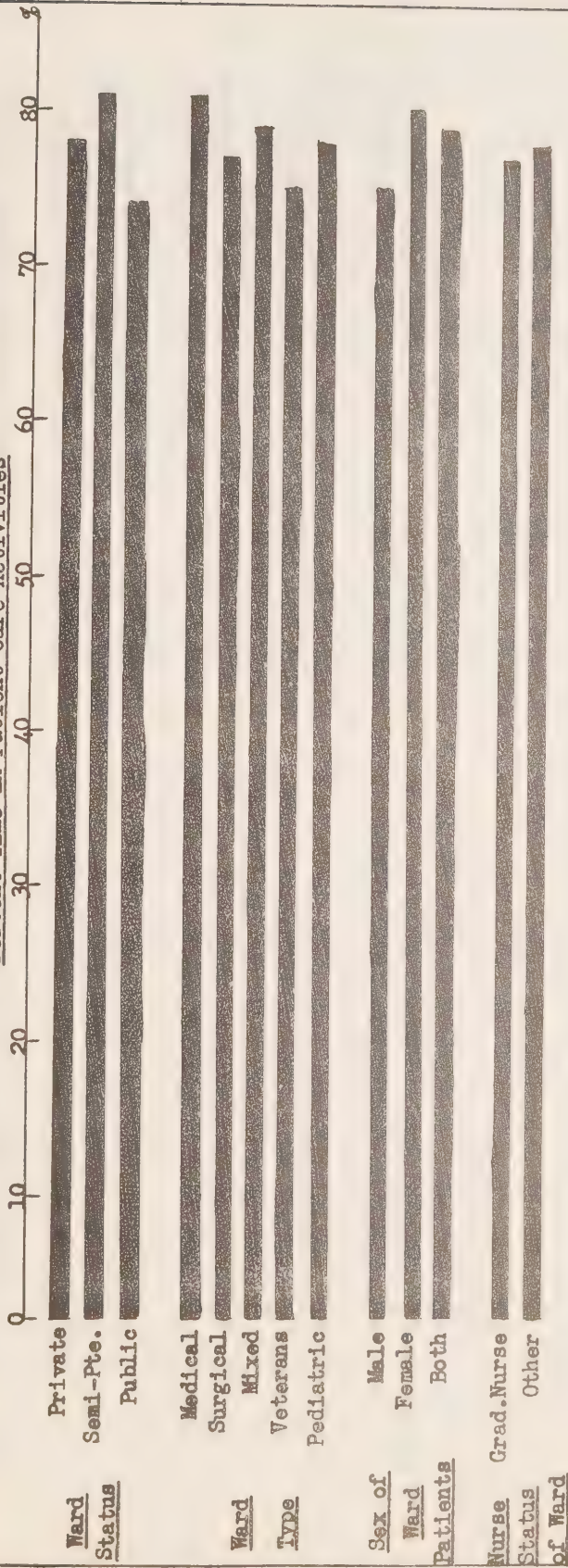
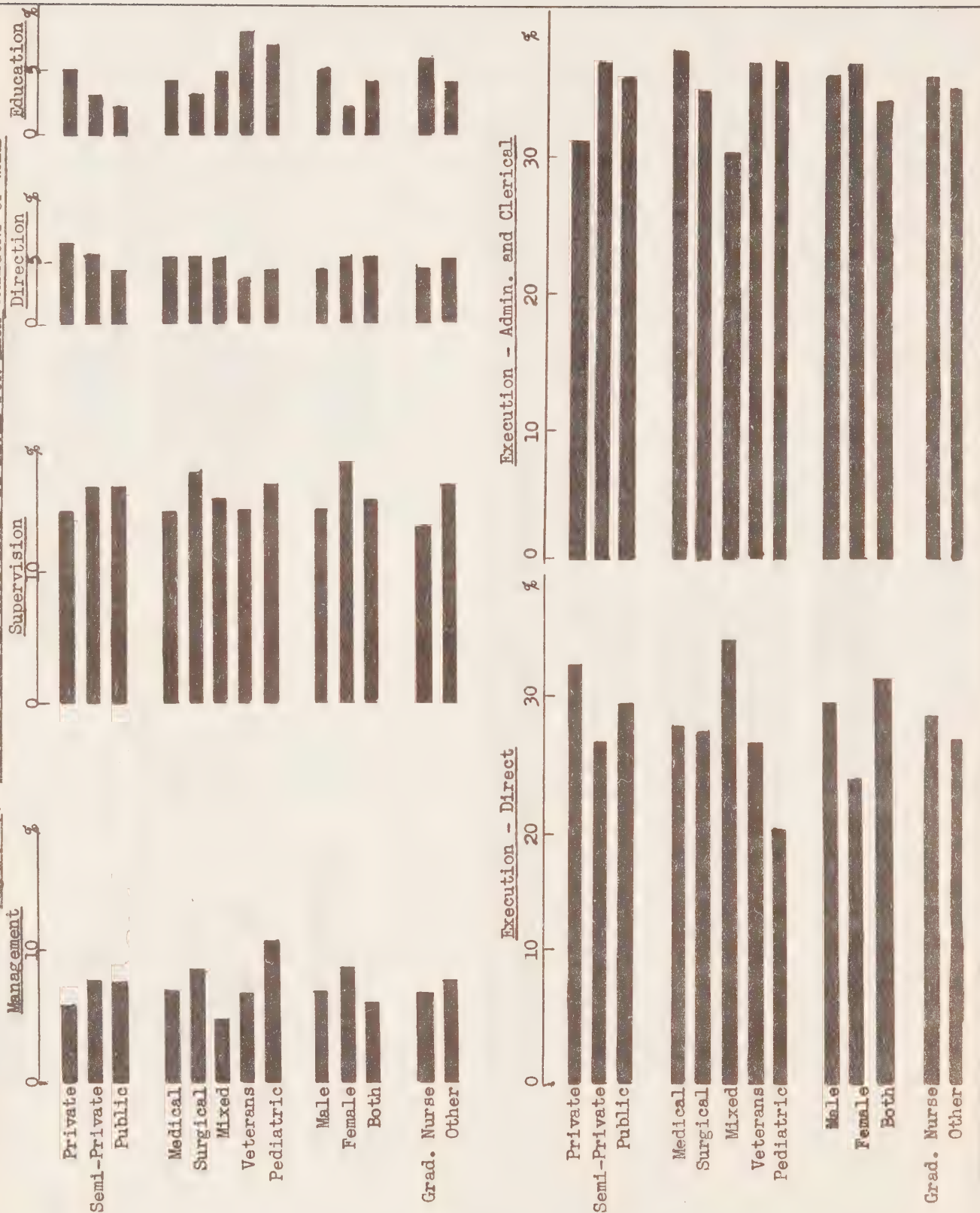


Figure 17. PERCENT TIME IN ACTIVITIES BY LEVEL FOR EACH CATEGORY OF WARD



The two children's and two veterans' wards also have supervisors but on only one of each pair (Wards 3 and 12) did the head nurses spend a high proportion of time on Patient Care. The other two head nurses (Wards 2 and 13) were attending a staff meeting (S.433) for practically a full observation hour and this largely accounts for their high proportion of time in Personnel Administration. It seems likely that the head nurses on these children's and veterans' wards also devote a relatively high proportion of time to Patient Care.

There is somewhat greater variation in the time spent in Ward Administration (Figures 14 and 16). Public wards show a particularly high proportion of time devoted to this area. Examination of the data for individual head nurses indicates that Ward 6, a public surgical, male ward, is responsible for this predominance of War Administration activities. For this ward the type of activity which took most of the time was H.514 - care of utensils and supplies. This did not generally appear as a major activity for other head nurses. Another activity in this group was also relatively more important for this ward than for others, viz., H.527 - securing, distributing and storing housekeeping supplies on the ward.

In Personnel Administration the range was only 8 to 14%, with mixed medical and surgical, and children's and veterans' wards showing highest percentages in this area. As already mentioned, the attendance of two head nurses at a staff meeting largely accounts for the high rank shown in this area for the one children's and one veterans' ward.

The distribution of time according to level of activity, as indicated in Figures 15 and 17, demonstrates the consistent preponderance of time devoted to Execution activities. In this level there is greater variation in Direct Execution than in Administrative and Clerical activities. Both children's wards show a low proportion of time on Direct Execution activities. In wards mixed as to both type and sex of patients and also in private wards, Direct Execution activities took a great deal of time while Administrative and Clerical activities were relatively less important.

Management, Supervision and Direction seem to take roughly the same proportion of the head nurse's time in wards of various kinds. Wards 11 and 12 which are the lowest, have little in common.

Veterans' and children's wards appear to require a lot of time for Education but this may be attributed to the staff meeting referred to above. As might be expected, head nurses on wards staffed entirely by graduate nurses spend less time on Education than those on wards with student nurses, but the difference is slight.

Patient Load

In addition to the characteristics of the ward represented by such factors as pay status and the type and sex of patients, another important attribute concerns the relative patient load on the wards. The activity pattern in terms of area and level has therefore been reviewed in the light of --

- a) the number of patients -- average beds occupied
- b) the turnover -- patient days as percent (admissions plus discharges)
- c) the ratio of patients to nursing staff.

The relevant data given in Table 18 and in the tables of Appendix F have been analyzed by comparing the percentages of total time for activity areas and levels with the above patient load indices. It is of interest, first of all, that there is no correlation between the ranks of the wards on any pair of these three factors. With two exceptions, there were no significant correlations (Spearman rank coefficient) between the ranks of wards for any of the above indices and the rank on the basis of percent time involved in activities of specified areas and levels. There was a significant positive correlation between Education and turnover, so that head nurses on wards having a relatively high turnover index had the highest proportion of time spent on Education activities. The other exception was a negative correlation between turnover and Ward Administration. The reason for these apparent correlations is not evident; the former may be due to orientation of new patients.

Thus, although there is a considerable range from high to low wards in respect to these indices of patient movement as shown in Table 18, this apparently does not result in corresponding variation in the activity pattern.

Table 18

Ward Characteristics, Patient Load and Staff

A. Ward Characteristics and Patient Load (Daily Averages for 10 Days Oct. 15-19, 22-26)

H.N.	Location	Ward		No. Beds	Beds Occup.	Beds Made Up	Admis.	Discharges	Turnover ¹	
		Status	Type						Occup.	Beds
1	1E	Public	Surg.	51	49.7	50.7	2.6	2.2	7.2	
2	1W	Children	Ped.	82	78.5	80.7	9.0	9.2	16.9	
3	2E	Semi-Pte.	Surg.	54	51.9	53.8	2.4	2.7	7.7	
4	2C	Public	Med.	56	52.7	55.9	2.7	2.2	6.8	
5	2W	Public	Surg.	61	58.7	60.9	3.1	2.8	6.8	
6	2N									
7	4W-N	Semi-Pte.	Surg.	37	65.1	65.9	5.2	4.9	12.1	
8	4W-S	Semi-Pte.	Surg.	29						
9	4E	Private	Med.	54	42.3	47.9	3.2	3.1	11.1	
10	5E	Private	Mixed	36	34.1	35.0	1.8	2.1	8.2	
11	5W	Private	Mixed	35	33.6	34.9	3.0	2.7	13.4	
12	Pav.A	Vets	Vets	54	52.0	54.0	1.3	1.5	4.2	
13	Pav.B	Vets	Vets	64	48.5	51.0	3.0	2.7	9.3	
14	Pav.C	Semi-Pte.	Med.	42	32.7	37.6	11.9	9.8	48.9	
15	Pav.D	Semi-Pte.	Surg.	54	53.4	54.0	4.2	3.8	11.0	
T				709	653.2	682.3	53.4	49.7		11.8

$$^1\text{Turnover} = \frac{\text{Beds Occupied}}{\text{Admissions}} \times 100$$

Table 18

B. Ward Staff - (Daily Averages for 10 Days Oct. 15-19, 22-26)

H.N.	Sup.	Head Nurse	Asst. Head N.	Gen. Staff Nurse	Total Grad.N.	Student Nurses	Ward Aide	Ward Clerk	Total Staff	Patients ¹
										Total Staff
1	-	.9	1.4	3.6	5.9	13.0	3.3	1.4	23.6	2.06
2	.9	1.9	-	6.4	9.2	23.8	5.8	2.0	40.8	1.92
3	-	.8	.8	5.3	6.9	11.1	1.4	.9	20.3	2.55
4	-	.9	1.0	3.4	5.3	17.1	1.5	1.0	24.9	2.12
5	-	.9	.8	6.4	8.1	16.4	2.5	1.5	28.5	2.06
6	-	.9	.8	4.7	6.4	10.1	1.8	1.0	19.3	1.82
7	.9	.5	.8	3.0	5.2	7.9	2.5	1.0	16.6	1.96
8	-	.9	.7	1.8	3.4	15.2	2.1	.9	21.6	1.71
9	-	1.0	.7	3.7	5.4	11.2	2.4	1.0	20.0	1.79
10	-	.9	.8	2.0	3.7	13.3	.9	.9	18.8	4.52
11	-	.5	-	8.3	8.0	-	1.7	1.0	11.5	4.58
12	-	.6	-	8.3	9.7	-	-	.9	10.6	2.29
13	.8	.8	.5	9.3	10.6	-	2.7	1.0	14.3	2.80
14	-	.9	.9	12.2	14.0	-	3.4	1.0	18.4	
15	-									
T	2.6	12.4	9.2	78.4	102.6	139.1	32.0	15.5	289.2	2.26

¹Patients = Beds Occupied.

Total Staff Total Staff(Col.10)

Related Factors

It is difficult also to assess the differences between head nurses with respect to the time spent at various locations and in activities involving contacts, forms, equipment and supplies (Tables 19-21). It is evident, for instance, that the head nurses on Wards 10 and 11 spent relatively more time with patients (as indicated by both Locations (Patients' Accommodation) and Contacts (Patients)*, and least time in other contacts and with forms, equipment and supplies. These are private wards with patients of both sexes and both medical and surgical cases; the latter factor only is shared by these two wards and not by the others. Though this might be a determining factor, it is noted in addition, that for a relatively high proportion of time the assistant head nurse rather than the head nurse was the subject of observation on the wards. This is also the case for head nurse on Ward 15 -- the next highest with respect to Patients' Accommodation and Patients. These wards were prominent too in proportion of time devoted to Personnel Administration and Direct Execution activities.

The fact that the head nurses on Wards 2 and 13 spent least time in the head nurse station and most in other areas, for example, may be because only these two head nurses were observed while attending the staff meeting.

There seems little in common between Wards 4 and 12 in respect to ward characteristics but for both wards the staff nurse was observed for a considerable proportion of the time; perhaps these nurses were inclined to remain at the nursing station to look after things there while the head nurse was away. These two head nurses were among the lowest in time spent with patients.

* There is, of course, a high correlation between time spent in Patients' Accommodation and time in Contacts with Patients.

The head nurse on Ward 2, the children's ward, spent a relatively large amount of time in service rooms on the ward; there is no obvious explanation of this.

When these factors, location, contacts, forms, equipment and supplies involved, are considered in relation to patient load indices we find only two correlations of interest. There appears to be a tendency for the head nurse on the larger wards (more beds occupied) to have a relatively high proportion of activity time devoted to forms, equipment and supplies and comparatively little time spent in dealing with other people.

As indicated above, these comments and data are presented as adding to the description of head nurse activities, but explanations of the possible relationships are not generally feasible in view of the multiplicity and interdependence of the factors involved.

Table 19

Time of Each Head Nurse by Locations (Places Activities Occurred)

A. Number of Intervals

Head Nurse	L o c a t i o n					Total
	Head Nurse Station	Patients accommodation	Other Ward Areas	Public Areas	Other areas outside Ward	
1	1227	427	160	106	-	1920
2	874	315	418	105	208	1920
3	1246	313	222	124	15	1920
4	1383	319	153	65	-	1920
5	1034	497	164	65	160	1920
6	1111	430	255	124	-	1920
7	1267	416	151	86	-	1920
8	1271	455	99	95	-	1920
9	1233	455	137	95	-	1920
10	1065	633	82	140	-	1920
11	1054	647	33	186	-	1920
12	1379	267	167	100	7	1920
13	899	373	238	130	280	1920
14	1265	455	75	125	-	1920
15	1033	584	184	119	-	1920
All Head Nurses Total	17341	6,586	2,538	1,665	670	28,800

B. Percent Distribution

1	63.91	22.24	8.33	5.52	-	100.00
2	45.52	16.41	21.77	5.47	10.83	100.00
3	64.90	16.30	11.56	6.46	0.78	100.00
4	72.03	16.61	7.97	3.39	-	100.00
5	53.85	25.89	8.54	3.39	8.33	100.00
6	57.86	22.40	13.28	6.46	-	100.00
7	65.99	21.67	7.86	4.48	-	100.00
8	66.20	23.70	5.16	4.95	-	100.01
9	64.22	23.70	7.14	4.95	-	100.01
10	55.47	32.97	4.27	7.29	-	100.00
11	54.90	33.70	1.72	9.69	-	100.01
12	71.82	13.91	8.70	5.21	0.36	100.00
13	46.82	19.43	12.39	6.77	14.58	99.99
14	65.89	23.70	3.90	6.51	-	100.00
15	53.80	30.42	9.59	6.20	-	100.01
All Head Nurses Total	60.21	22.87	8.82	5.78	2.33	100.01

Table 20

Time of Each Head Nurse by Contacts (Persons Involved in Activities)

A. Number of Intervals*

Contacts Head Nurse	Medical Staff	Nursing Staff (Excl.aux.)	Auxiliary Nursing Staff	Patients	Other Contacts	No Contacts	Total
1	310	610	79	262	102	557	1920
2	215	677	160	177	86	605	1920
3	153	460	111	184	103	909	1920
4	222	522	51	169	184	772	1920
5	252	645	70	322	83	548	1920
6	212	542	91	289	153	633	1920
7	227	660	83	239	114	597	1920
8	191	573	44	325	59	728	1920
9	120	631	101	358	152	558	1920
10	143	590	79	561	98	449	1920
11	259	548	69	555	106	383	1920
12	425	363	126	178	153	675	1920
13	246	637	107	260	190	480	1920
14	266	483	122	353	130	566	1920
15	230	378	175	431	128	578	1920
All Head Nurses Total	3471	8319	1468	4663	1841	9038	28800

B. Percent Distribution

1	16.15	31.77	4.11	13.65	5.31	29.01	100.00
2	11.20	35.26	8.33	9.22	4.48	31.51	100.00
3	7.97	23.96	5.78	9.58	5.36	47.34	99.99
4	11.56	27.19	2.66	8.80	9.58	40.21	100.00
5	13.12	33.59	3.65	16.77	4.32	28.54	99.99
6	11.04	28.23	4.74	15.05	7.97	32.97	100.00
7	11.82	34.37	4.32	12.45	5.94	31.09	99.99
8	9.95	29.84	2.29	16.93	3.07	37.92	100.00
9	6.25	32.86	5.26	18.65	7.92	29.06	100.00
10	7.45	30.73	4.11	29.22	5.10	23.39	100.00
11	13.49	28.54	3.59	28.91	5.52	19.95	100.00
12	22.14	18.91	6.56	9.27	7.97	35.16	100.01
13	12.81	33.18	5.57	13.54	9.90	25.00	100.00
14	13.85	25.16	6.35	18.39	6.77	29.48	100.00
15	11.98	19.69	9.11	22.45	6.67	30.10	100.00
All Head Nurses Total	12.05	28.89	5.10	16.19	6.39	31.38	100.00

* Includes 1,087 intervals of contacts by telephone.

Table 21

Time of Each Head Nurse by Forms, Equipment and Supplies Involved

A. Number of Intervals

Head Nurse	Forms, Equip. & Supplies	Forms		Equipment & Supplies		None	Total
		Medical & Nursing	Other	Medical & Nursing	Other		
1		530	275	197	140	778	1920
2		455	281	100	132	952	1920
3		904	180	185	114	537	1920
4		697	160	307	249	507	1920
5		686	93	235	159	747	1920
6		464	126	261	349	720	1920
7		743	110	286	108	673	1920
8		743	176	190	113	698	1920
9		582	189	253	195	701	1920
10		437	108	186	153	1036	1920
11		459	70	203	156	1032	1920
12		814	44	237	187	638	1920
13		553	118	128	287	834	1920
14		736	70	135	125	854	1920
15		542	131	321	262	664	1920
All Head Nurses Total		9345	2131	3224	2729	11371	28800

B. Percent Distribution

1	27.60	14.32	10.26	7.29	40.52	99.99
2	23.70	14.64	5.21	6.87	49.58	100.00
3	47.08	9.37	9.64	5.94	27.97	100.00
4	36.30	8.33	15.99	12.97	26.41	100.00
5	35.73	4.84	12.24	8.28	38.91	100.00
6	24.17	6.56	13.59	18.18	37.50	100.00
7	38.70	5.73	14.90	5.62	35.05	100.00
8	38.70	9.17	9.90	5.89	36.35	100.01
9	30.31	9.84	13.18	10.16	36.51	100.00
10	22.76	5.62	9.70	7.97	53.96	100.01
11	23.91	3.65	10.57	8.12	53.75	100.00
12	42.40	2.29	12.34	9.74	33.23	100.00
13	28.80	6.15	6.67	14.95	43.44	100.01
14	38.33	3.65	7.03	6.51	44.48	100.00
15	28.23	6.82	16.72	13.65	34.58	100.00
All Head Nurses Total	32.45	7.40	11.19	9.48	39.48	100.00

6. C.N.A. Allocation of Activities to Appropriate Nurse Status

While this was primarily a descriptive study to show what the head nurse was doing, it was obviously desirable to attempt some evaluation of her activities by way of answering the question: Is the head nurse spending her time on functions appropriate to her position, or is she devoting time to duties that should be performed by others?

Unfortunately, no authoritative standards are immediately available and applicable to say what a head nurse should or should not be doing. As mentioned earlier, there is general agreement that she is the manager or administrator of a nursing unit. Various statements of her duties and responsibilities have been prepared but these are usually expressed in general terms or without distinguishing clearly those duties which are the primary responsibility of the Head Nurse in contrast to others on the nursing staff. Nor are there any quantitative standards available indicating the proportion of time that should be devoted to various activities or even to major areas of responsibility.

An attempt was made to establish a qualitative evaluation of the activities of head nurses observed in this Study. The Canadian Nurses' Association undertook to review the classification of activities and indicate for each specific activity the appropriate status of nursing service personnel, that is, who should be carrying out the activity. This was done by a C.N.A. committee, and the work was reviewed in detail in Ottawa by Miss Fidler, C.N.A. Consultant on the Study, Miss Percy, Nursing Consultant in the Department, Mr. Walker and Mr. Josie of the Research Division. It is important to realize that this specification

of appropriate nurse status was done from a review of the classification and code system without reference to any of the Study data. Thus, from this standpoint at least, the allocation was objective and unbiased.

The results of this allocation of functions are shown in Appendix E, where for each specific type of activity the member of the nursing or auxiliary staff who should normally be carrying out the activity is indicated. There is also included a summary of the observed activities and time involved.

When the activities were analyzed according to this allocation it was found (Tables 22-25 and Fig. 18) that the head nurses spent about 57% of their time in activities that the C.N.A. regarded as appropriate to head nurses. About 15% of the time was spent on staff nurse duties, about 4% on nursing assistant activities, 6% on ward aide, and 17% on ward clerk duties. A small and negligible amount of time was taken up by duties appropriate to instructors and supervisors.*

Of the time involved in Patient Care activities about 58% was devoted to appropriate head nurse duties, 20% staff nurse, 5% nursing assistant, and 15% ward clerk activities. In the case of Ward Administration duties about one-third of the head nurse time was spent on activities appropriate to her status, about half the time was devoted to ward aide activities, and 16% to ward clerk duties. Most of the Personnel Administration time (73%) was spent on head nurse duties, the remainder, 27%, practically all on ward clerk duties.

* All Supervision and Direction activities were considered appropriate Head Nurse functions.

The time that the head nurses spent on staff nurse duties was occupied entirely in Patient Care activities, particularly Execution - administrative and clerical, direct execution, and Education activities, in that order. The nursing assistant duties that the head nurse was observed to be carrying out were all Patient Care - direct execution activities. As might be expected, the ward aide activities being carried on by head nurses were nearly all in the ward administration group. Activities considered appropriate to the ward clerk were largely administrative and clerical activities in patient care, but included some of these duties in ward administration also.

From the standpoint of possible delegation of functions by the head nurse to her staff, the major gain would be by handing over duties to staff nurses and the ward clerk, such duties represented about 15% and 17% of her time, respectively. In both instances these duties lie mainly in the Patient Care area. As might be anticipated, some additional time may be saved by delegation of certain nursing assistant and ward aide duties in Patient Care and Ward Administration areas, respectively.*

* See for comparison U.S. P H.S. Head Nurse Activities in a General Hospital references to "reassignable time".

TIME ACCORDING TO
C.N.A. ALLOCATION OF ACTIVITIES

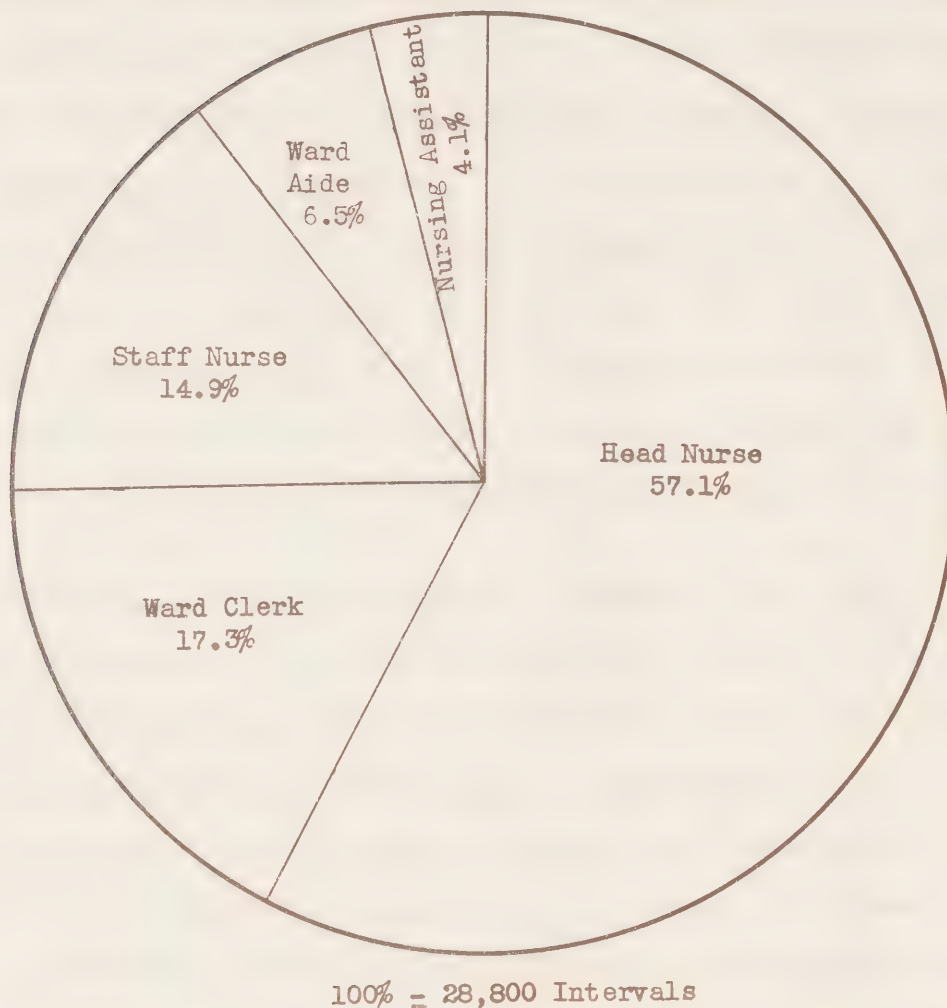


Figure 18. Percent Distribution of Time According to C.N.A. Allocation of Activities

Head Nurse Study: Data from Table 22.

Table 22

C.N.A. Allocation of Activities to Appropriate Status
of Nursing Personnel

Status of Nursing Personnel	Activities		Time	
	No.	%	No. Intervals	%
Instructor	1	0.01	3	0.01
Supervisor	12	0.09	29	0.10
HEAD NURSE	7,994	56.99	16,456	57.14
Staff Nurse	1,923	13.71	4,279	14.86
Nursing Assistant	676	4.82	1,189	4.13
Ward Aide	1,040	7.41	1,864	6.47
Ward Clerk	2,382	16.98	4,980	17.29
T o t a l	14,028	100.01	28,800	100.00

Table 23

Distribution of Activities by Area and Level
According to C.N.A. Designation of Appropriate Nursing Personnel

Activity (Type)	Instructor	Supervisor	Head Nurse	Staff Nurse	Nursing Asst.	Ward Aide	Ward Clerk	T o t a l
PATIENT CARE								
Management		2	667					669
Supervision			2,083					2,083
Direction			745					745
Education			-	296				296
Exec.-Direct			984	682	676	20		2,362
Exec.-Admin.&Clerical			1,748	945	-	-	1,600	4,293
T o t a l		2	6,227	1,923	676	20	1,600	10,448
WARD ADMINISTRATION								
Management		4	151					155
Supervision			309					309
Direction			208					208
Education			-					-
Exec.-Direct			15			1,020	13	1,048
Exec.-Admin.&Clerical			15				310	325
T o t a l		4	698			1,020	323	2,045
PERSONNEL ADMINISTRATION								
Management			57					57
Supervision			37					37
Direction			17					17
Education	1		69					70
Exec.-Direct		6	636					642
Exec.-Admin.&Clerical			28				459	487
T o t a l	1	6	844				459	1,310
In Transit			219					219
Personal			6					6
GRAND TOTAL	1	12	7,994	1,923	676	1,040	2,382	14,028

Table 24

Distribution of Time by Area and Level

According to C.N.A. Designation of Appropriate Nursing Personnel

Activity (Type)	Instructor	Supervisor	Head Nurse	Staff Nurse	Nursing Asst.	Ward Aide	Ward Clerk	Total
PATIENT CARE								
Management		2	1,811					1,813
Supervision			4,144					4,144
Direction			1,025					1,025
Education				614				614
Exec.-Direct			1,723	1,993	1,189	34		4,939
Exec.-Admin.&Clerical			4,067	1,672			3,584	9,323
T o t a l		2	12,770	4,279	1,189	34	3,584	21,858
WARD ADMINISTRATION								
Management		12	305					317
Supervision			564					564
Direction			291					291
Education			-					-
Exec.-Direct			21			1,830	20	1,871
Exec.-Admin.&Clerical			29				563	592
T o t a l		12	1,210			1,830	583	3,635
PERSONNEL ADMINISTRATION								
Management			189					189
Supervision			68					68
Direction			24					24
Education	3		672					675
Exec.-Direct		15	1,167					1,182
Exec.-Admin.&Clerical			89				813	902
T o t a l	3	15	2,209				813	3,040
In Transit			246					246
Personal			21					21
GRAND TOTAL	3	29	16,456	4,279	1,189	1,864	4,980	28,800

Table 25

Percent Distribution of Time by Area and Level

According to C.N.A. Designation of Appropriate Nursing Personnel

Activity (Type)	Instructor	Supervisor	Head Nurse	Staff Nurse	Nursing Asst.	Ward Aide	Ward Clerk	T o t a l
PATIENT CARE								
Management		0.01	6.29					6.30
Supervision			14.39					14.39
Direction			3.56					3.56
Education				2.13				2.13
Exec.-Direct			5.98	6.92	4.13	0.12		17.15
Exec.-Admin.&Clerical			14.12	5.81			12.44	32.37
T o t a l		0.01	44.34	14.86	4.13	0.12	12.44	75.90
WARD ADMINISTRATION								
Management		0.04	1.06					1.10
Supervision			1.96					1.96
Direction			1.01					1.01
Education								
Exec.-Direct			0.07			6.35	0.07	6.50
Exec.-Admin.&Clerical			0.10				1.95	2.06
T o t a l		0.04	4.20			6.35	2.02	12.62
PERSONNEL ADMINISTRATION								
Management			0.66					0.66
Supervision			0.24					0.24
Direction			0.08					0.08
Education	0.01		2.33					2.34
Exec.-Direct		0.05	4.05					4.10
Exec.-Admin.&Clerical			0.31				2.82	3.13
T o t a l	0.01	0.05	7.67				2.82	10.56
In Transit			0.85					0.85
Personal			0.07					0.07
GRAND TOTAL	0.01	0.10	57.14	14.86	4.13	6.47	17.29	100.00

IV. SUMMARY AND CONCLUSIONS

1. The basic purpose of the Study was to obtain a description of the Head Nurse functions and activities in a general hospital. The data provide a comprehensive and detailed picture of the functions and activities of head nurses observed while in charge of all types of wards (except maternity) of a large general hospital. The data also answer questions posed initially as to the frequency and duration of activities of various kinds; the activities are described in terms of area and level and about 250 specific categories. In addition, the description includes reference to the places the activities occurred and the persons, forms, equipments and supplies involved. The data are unbiased with respect to observers and head nurses. (Appendix D)

2. This was a pilot project and a methodology has been developed which seems adequate for the purpose, is reproducible and applicable to other studies of this kind, and with appropriate modifications, to the investigation of other members of the nursing and related staffs in general hospitals. The methodology is described in some detail in the Report and its Appendices.

3. Two aspects of the methodology merit special comment. First, the development of adequate classification and code systems for activities and places, persons, and equipment and supplies was an essential preliminary to the analysis of the data. The classification system for functions and activities for head nurses is systematic and detailed. It should be of considerable help in conducting other studies.

Secondly, the attention paid to the design of the Study in the initial planning stages as well as in carrying it out resulted in data adequate for the purpose of the project. The data were unbiased, representative and detailed, and of a known high degree of precision. (Appendix D).

4. The careful allocation of functions to the appropriate nurse status by the Canadian Nurses' Association representatives, at the request of the research group, provides a new and authoritative basis for further research in the evaluation of nursing functions.

5. The total observation time of 120 hours was sufficient for the description and analysis of head nurse activities. It was also possible to indicate major differences between head nurses and between wards, but not to make precise comparisons in detail for all factors. The fact that the person found to be in charge of the ward -- even if not the head nurse -- was observed at the scheduled period, resulted in a reduction of the observation time for head nurses. This proved to be no real disadvantage in obtaining the picture of head nurse activities and did add somewhat to the description of the functions of the person in charge of a ward. It would perhaps be useful to compare these activities of the substitute with her regular duties.

6. The overall consistency of the pattern of activity among head nurses on all types of wards is not unexpected but is significant as indicating the fundamental nature of the description presented by this Study. This similarity of work pattern has been pointed out also in the Nuffield Report.* It should serve as a sound basis for planning any changes considered necessary or advisable.

* The Work of Nurses in Hospital Wards. The Nuffield Provincial Hospitals Trust. London. 1953, p. 57.

The outstanding feature of the pattern is the extremely short duration of most activities, about one-half minute or less. The U.S. Public Health Service Report also found short duration activities very common.* This seems inconsistent with the concept of the head nurse as a manager of a nursing unit. It suggests, rather, that she is not in control of the situation but that the head nurse's activities are a function of the circumstances in which she finds herself and with which she is inadequately equipped by training, experience or authority to deal. The Nuffield Report (p.137) in proposing a large area for ward organization says an essential condition for such a system is that "The ward sister shall be able to plan her day, if not completely, at any rate to a greater extent than she can at present." In this connection the Nuffield Report also points out that the number of beds had no appreciable effect on the time spent on organizational duties (p.136). This seems in line with findings of this Study respecting ward size (occupied beds) in relation to the activity pattern.

7. While the solution of this situation would seem to be a re-allocation of functions so that the head nurse would have time to think and plan, this is no simple matter but raises other problems. The data indicate that the head nurse is spending about 40% of her time on functions that others should be doing. Presumably she should delegate these. Two questions arise: a) Can she delegate? Does she know how to do this and is the opportunity actually present? It is relevant here to point out that her contacts with the assistant head nurse and ward clerk - to

* Head Nurse Activities in a General Hospital. Public Health Monograph No.3, U.S. Public Health Service. Washington, 1951. pp.10,15.

whom she might be expected to delegate activities -- accounted for only 2.2 and 3.2% of total time, respectively. Perhaps she needs to spend more time with them to make the best use of their services. The data also give the impression that the assistant head nurse functions only as a substitute and not as an assistant; perhaps there is no provision for this in the organization. If the assistant head nurse is regarded as a full-time staff nurse when the head nurse is present, she cannot be a full-time assistant and a full-time staff nurse at the same time.

b) The second question concerns the present activities of the persons to whom the head nurse might delegate activities. Are they now fully engaged in appropriate activities? If so, how could they assume further responsibilities? There is a subsidiary question analogous to that for the head nurse: Are the others, especially the ward clerk, able, in terms of qualifications, to assume these delegated duties? The Muffield Report points out (p.137) that there is a tendency for the ward clerk to be assigned any duties "which nobody else wants". They suggest that a ward clerk should function as secretary-receptionist, not as "errand boy".

In view of the importance of this possibility of re-allocation and delegation of head nurse activities, the investigation of the functions of other members of the nursing and auxiliary staffs would seem a fruitful field for further research. They should be considered in relation to the actual and appropriate qualifications of such staff members. This applies particularly to the ward clerk.

Re-allocation of functions should not only be viewed in terms of delegation of functions by the head nurse. Perhaps she needs to be

relieved of functions and assisted more by the nursing and other administrative staff. Should not more be done by way of central planning of regular functions common to all wards; e.g., preparation of assignment and rotation schedules? It is appreciated that there are differences from ward to ward and that emergencies arise perhaps with greater frequency and more serious consequences in hospitals than elsewhere. Nevertheless administrative plans and organization must be based on consideration of the normal day-to-day program and routine of the hospital. If routine requirements are clearly and simply set out in detail, then the head nurse might be free to deal with emergencies and to plan improvements in the quality of the patient care, which is her primary responsibility.

8. Finally, the need for quantitative standards for the evaluation of head nurse activities must be emphasized. In addition to the authoritative statements of what the head nurses should or should not do, we need to know what relative amount of her time should be devoted to the approved activities. This applies also to other categories of nursing personnel and represents another field for further study.

APPENDIX A

DATA RE OTTAWA CIVIC HOSPITAL

APPENDIX A

DATA RE OTTAWA CIVIC HOSPITAL

Established 1924

1. General Information*

W.Douglas Piercey, M.D.,
Superintendent

For the Year Ending Sept. 30, 1951

A -- Approvals. Memberships:

1. American College of Surgeons
3. Interns A.M.A.
4. Interns CMA
5. Medical School
6. Nurses Training School
8. State Hospital Association
9. Blue Cross

F -- Facilities

1. Blood Bank
2. Cancer Clinic
5. Clinical Laboratory
6. Dental Department
7. Electrocardiograph
8. Electroencephalograph
9. Library, Medical
10. Library, Patient's
11. Medical Records Department
12. Mental Hygiene Clinic
13. Metabolism Apparatus
15. Outpatient Department
16. Pharmacy
17. Physical Therapy Department
19. Social Service Department
20. X-Ray, Diagnostic
21. X-Ray, Routine Chest on Admission
22. X-Ray, Therapeutic

C -- Classifications

14. City or Municipal
 1. Short Term
 3. General

Beds.....853
Census...724

Bassinets..80
Census.....57

Admissions...21,852
Births..... 2,384
OPD Visits...22,289

<u>Assets</u>	
Fixed-Net	\$4,500,000
Total	\$5,250,000

<u>Expenditures</u>	
Pay	\$1,498,262
Total	\$2,747,416

*Source: Hospitals - Administrators Guide Issue, Vol. 26, No. 6 Part II,
June 1952, p. 165.

2. PATIENT LOAD AND STAFF OF CANADIAN GENERAL HOSPITALS WITH MORE THAN 500 BEDS

Summary Data For Year Ending September 30, 1951

Name of Hospital	B e d s		Bassinets		Admissions	Births	Personnel Paid	Int. & Res. Students
	No.	Census	No.	Census				
Ottawa Civic	853	724	80	57	21,852	2,384	1,010	341
St. Michael's (Toronto)	833	-	98	-	-	-	895	-
Toronto General	1,416	1,221	207	126	29,268	4,984	2,360	-
Toronto Western	479	413	71	45	13,987	2,467	875	229
Hamilton General	935	836	142	102	26,685	5,228	885	295
Victoria (London)	617	493	50	33	12,901	1,405	662	241
Hotel-Dieu (Montreal)	535	487	-	-	11,437	-	595	232
Royal Victoria (Montreal)	748	647	115	78	18,217	3,041	1,241	486
Montreal General	641	541	19	13	14,285	513	1,235	290
Notre-Dame (Montreal)	641	589	60	39	13,215	1,886	721	281
Hotel-Dieu St.-Vallier (Chicoutimi)	771	501	60	45	39,655	1,389	-	-
Winnipeg General	724	592	164	56	16,308	2,561	749	352
Regina General	753	591	60	39	12,607	1,479	645	267
University of Alberta (Edmonton)	594	508	30	23	10,879	894	550	210
St. Paul's (Vancouver)	556	-	65	-	-	-	950	378
Vancouver General	1,243	1,131	130	104	28,205	4,411	1,549	562

Source: Hospitals. Administrators Guide Issue, Vol. 26, No. 6, Part II. June 1952.

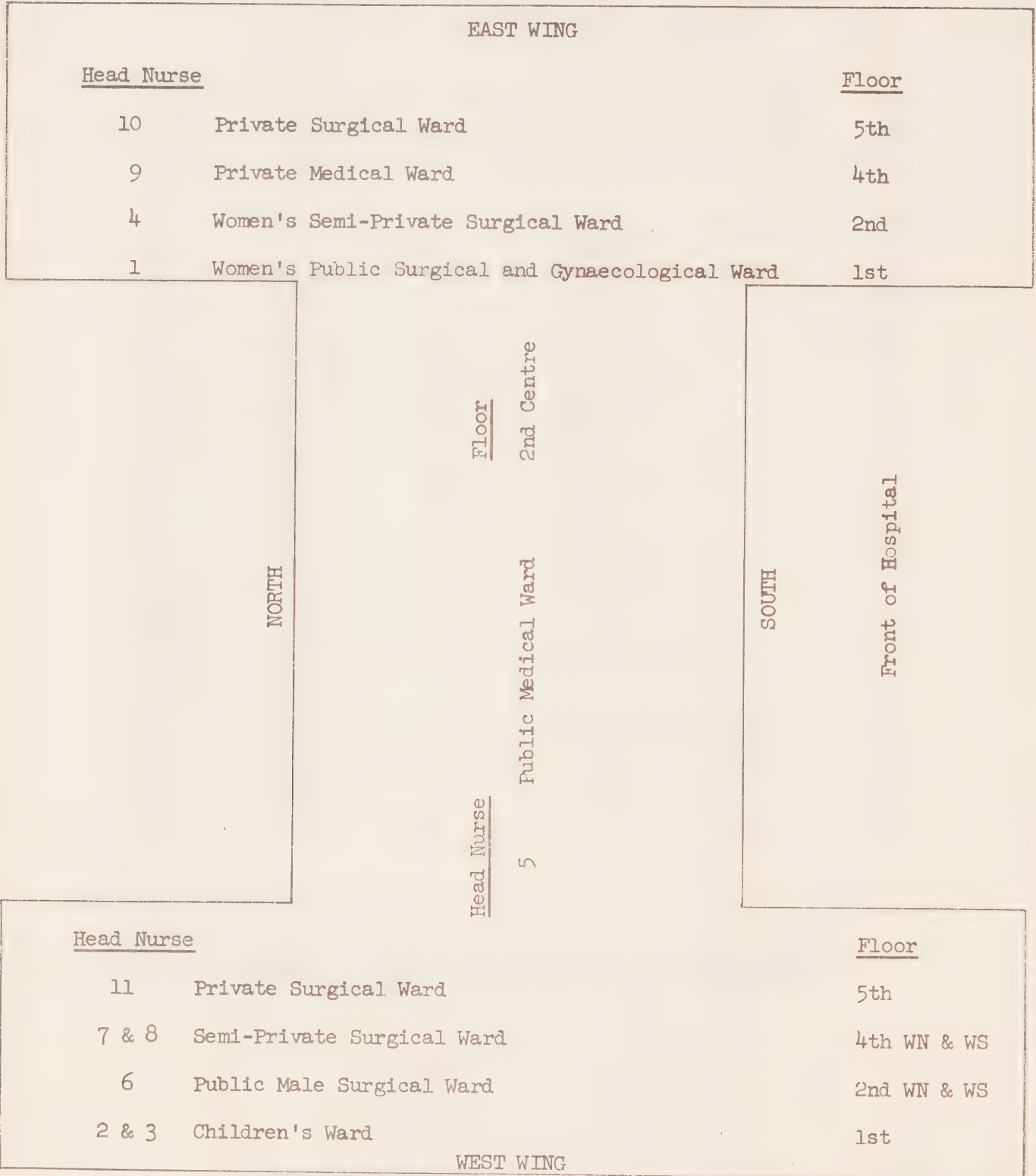
3. OTTAWA CIVIC HOSPITAL - PATIENT LOAD DATA - 1925-1951

Year	Admissions	Days' Stay	Operations	Live Births	O.P.D. Treatments
1925	7,082	129,365	3,594	458	8,129
1926	8,229	141,265	4,027	467	10,865
1927	8,752	147,719	3,904	532	11,240
1928	9,115	156,076	4,106	598	10,547
1929	8,988	151,370	4,045	659	11,119
1930	9,673	161,436	4,166	753	13,064
1931	9,617	157,797	4,489	720	15,900
1932	9,208	152,950	3,867	725	20,447
1933	9,659	155,649	4,326	778	31,031
1934	10,221	161,565	5,040	846	30,663
1935	11,088	173,259	4,997	920	26,173
1936	10,737	172,424	5,066	977	26,694
1937	11,109	164,943	5,478	931	26,779
1938	11,628	173,141	5,945	953	30,587
1939	12,213	179,321	6,139	969	30,178
1940	13,570	200,564	6,415	1,096	28,131
1941	14,330	203,820	6,726	1,247	30,508
1942	15,644	222,967	7,375	1,427	31,872
1943	15,892	234,640	6,758	1,628	30,759
1944	16,179	242,322	7,172	1,684	20,785
1945	18,354	276,795	7,521	1,804	28,906
1946	21,154	298,442	7,821	2,809	38,310
1947	21,932	271,030	8,255	2,870	40,323
1948	21,704	265,938	9,186	2,356	41,439
1949	22,320	269,196	9,809	2,317	41,998
1950	21,852	273,110	10,183	2,384	46,292
1951	22,425	272,056			47,973

Source: Twenty-sixth Annual Report, Ottawa Civic Hospital, 1950. p.26
Twenty-seventh Annual Report, Ottawa Civic Hospital, 1951.
 pp. 15 and 46.

4. LOCATION OF WARDS IN OTTAWA CIVIC HOSPITAL

(Head Nurse Stations Generally at Centre of Outside Wall)



[illegible]

No.	Location Ward	Number of Beds	Number of Admissions										Number of Discharges									
			15	16	17	18	19	22	23	24	25	26	15	16	17	18	19	22	23	24	25	26
1	East	51	4	1	5	2	-	1	3	4	3	4	3	8	1	3	2	7	2	6	3	8
2	West	82	11	5	12	10	11	8	9	10	9	10	8	10	7	11	7	10	13	12	4	4
3	East	54	2	2	1	3	3	1	4	2	3	2	2	2	1	3	1	4	4	3	4	4
4	Centre	56	3	1	5	1	3	5	3	2	1	2	2	2	4	2	2	1	2	4	1	4
5	West N+S	61	4	3	2	6	4	4	1	4	3	2	2	2	5	2	2	1	4	6	6	6
6	West N	57	3	4	2	3	7	4	6	8	1	6	5	2	2	4	9	5	6	1	5	6
7	West S	29	3	4	5	3	7	4	1	8	6	5	2	2	2	2	2	3	3	6	3	3
8	East	54	2	5	2	3	7	4	6	8	1	6	4	2	5	2	3	5	3	3	1	3
9	East	56	3	5	2	3	7	4	3	8	1	6	4	2	3	2	3	3	4	1	1	3
10	East	35	2	3	2	3	1	4	2	4	1	5	4	2	3	2	3	5	4	1	1	3
11	East	35	2	3	2	3	1	4	2	4	1	5	4	2	3	2	3	5	4	1	1	3
12	Vet A	54	2	1	2	1	2	1	2	3	3	3	1	2	1	2	3	3	1	4	0	6
13	Vet B	64	4	1	3	2	2	1	2	3	3	3	1	2	1	3	0	2	1	4	0	6
14	Vet C	42	11	12	12	10	12	21	5	10	12	5	13	11	13	8	11	11	11	7	10	6
15	Vet D	54	5	3	3	6	4	5	2	3	6	5	4	3	5	3	2	3	4	6	3	3

6. Staff of Wards Under Observation - Ottawa Civic Hospital - October 15-19, 22-26, 1951

Ward No.	Total Staff*										General Staff Nurses									
	15	16	17	18	19	22	23	24	25	26	15	16	17	18	19	22	23	24	25	26
1	26	26	23	23	23	23	26	23	23	21	3	6	3	5	4	2	3	4	4	2
2)	40	40	39	40	43	40	41	43	41	42	5	6	5	8	7	7	7	6	6	7
3)	19	22	20	22	23	21	19	19	20	18	5	7	4	5	7	5	5	6	5	4
4	26	27	25	26	26	26	24	24	23	22	3	5	3	4	4	4	3	3	3	2
5	30	20	26	28	28	30	31	31	26	28	7	6	6	6	6	7	8	5	5	5
6	17	18	18	17	17	17	22	23	20	21	3	4	4	4	4	3	9	4	4	6
7	17	16	16	17	17	16	17	16	17	17	4	2	2	3	1	2	3	2	4	5
8	22	23	21	20	22	20	24	22	23	23	2	2	1	3	1	1	3	2	3	3
9	20	23	22	22	20	22	18	19	17	17	4	5	6	4	4	5	2	2	1	2
10	19	19	19	19	19	19	18	17	19	20	2	2	3	1	2	2	2	2	2	2
11	12	11	12	12	12	12	11	11	11	11	9	9	9	9	9	8	7	8	9	7
12	11	10	11	11	11	9	11	11	11	10	9	8	9	9	8	8	8	8	9	8
13	14	15	14	13	16	14	15	15	14	13	9	9	9	10	10	8	9	10	10	9
14	18	18	18	19	19	19	18	18	18	19	12	12	13	12	12	12	12	12	12	13
15	18	18	18	19	19	19	18	18	18	19	12	12	13	12	12	12	12	12	12	13
Total	291	294	283	289	294	291	294	292	285	281	77	83	77	81	79	74	81	81	76	75

Ward No.	Student Nurses										Ward Aides									
	15	16	17	18	19	22	23	24	25	26	15	16	17	18	19	22	23	24	25	26
1	16	12	11	13	12	15	15	11	12	13	3	4	4	2	3	3	4	4	4	2
2)	24	23	22	22	25	23	23	27	24	25	6	6	6	5	5	6	6	5	6	6
3)	12	11	11	12	13	12	10	10	10	10	2	1	2	2	2	1	2	1	2	2
4	18	17	18	18	18	17	16	16	16	17	2	2	1	1	1	2	2	2	1	1
5	19	17	16	16	16	17	17	16	16	15	2	3	2	3	2	2	2	2	2	4
6	11	9	9	9	9	12	9	12	12	10	1	2	2	2	2	2	1	2	2	2
7	11	8	8	8	10	9	8	7	8	6	2	2	2	2	3	2	3	2	2	2
8	7	8	8	15	15	15	17	16	15	15	3	2	2	2	3	2	2	3	3	3
9	16	14	15	15	11	11	11	11	12	11	2	2	2	2	3	2	2	2	2	2
10	11	12	11	11	11	11	11	11	12	11	2	3	2	3	2	3	2	2	2	2
11	13	13	13	14	14	13	13	12	14	14	1	1	1	1	1	1	2	1	1	1
12	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	3	3	3	2	3	3	3	3	2	2
15	-	-	-	-	-	-	-	-	-	-	3	3	3	4	4	4	3	3	3	4
Total	146	136	133	138	142	144	139	138	139	136	30	33	32	32	34	33	31	31	31	33

* Total staff includes supervisors, head nurses, ward nurses, ward clerks.

APPENDIX B

SELECTED BIBLIOGRAPHY

APPENDIX B

SELECTED BIBLIOGRAPHY

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Note: 1) The American Journal of Nursing has published lists of "Research Studies in Nursing Service and Nursing Education" with brief summaries. These appeared in the following issues:

Vol.49, No.9. pp.612-614. (Sept. 1949)

Vol.50, No.3. pp.193-194. (March 1950)

Vol.50, No.8. pp.512-514. (Aug. 1950)

Vol.51, No.4. pp.278-280. (April 1951)

Vol.51, No.8. pp.34 adv. - 40 adv. (August 1951)

2) The American Nurses' Association Program of Studies of Nursing Functions was outlined and discussed in "Research and the ANA Program for Studies of Nursing Functions". The American Journal of Nursing, Vol.50, No.12. pp.767-770. (December 1950).

APPENDIX C

INSTRUCTIONS AND CODES

APPENDIX C - INSTRUCTIONS AND CODES

HEAD NURSE STUDY

1. (a) Information for Head Nurses

1. A schedule of observation periods has been provided for the two weeks, Monday to Friday, October 15-19 and October 22-26, 1951.
2. The schedule has been designed to meet the following specifications (which are to insure adequate coverage of Head Nurses' activities throughout the 12 hours of the hospital day):
 - (a) each Head Nurse will be observed for eight one-hour periods;
 - (b) the eight periods for each Head Nurse will cover a full twelve-hour hospital day;
 - (c) each Head Nurse will be observed by each of the four observers for two periods;
 - (d) the observation periods are distributed randomly (within the above restrictions) throughout the two-week period.
3. The observation periods are distributed so that there will be:
 - (a) a maximum of three observation periods in a day for any Head Nurse;
 - (b) a maximum of five observation periods in a day for an Observer.
4. If the Head Nurse considers at any time during any observation period that the care of the patient would be jeopardized or seriously interfered with by the presence of the Observer, she will ask the Observer to stay outside the ward or room or at some appropriate distance. The Observer will do this and fill in the Activity Record subsequently by asking the Head Nurse what she was doing when she was not under immediate observation. The Observer should indicate any such circumstances clearly on the Activity Record.
5. The Head Nurse will not be advised, in advance, of the periods during which she will be observed. It is important that as far as practicable she carry on her activities as though the Observer were not present. The Head Nurse may, however, be asked for supplementary information or explanations and she can help by making clear to the Observer the nature of her activity where this is not evident at a distance. The continued co-operation of the Head Nurse will be greatly appreciated.

Research Division,
Department of National Health and Welfare,
October 15th, 1951.

HEAD NURSE STUDY

1. (b) Information and Instructions for Observers

1. A Schedule of Observation Periods has been prepared and it is essential to the success of our study that this schedule be followed precisely.
2. The schedule has been designed to meet the following specifications, (which are to insure adequate coverage of Head Nurses' activities throughout the 12 hours of the hospital day):
 - (a) each Head Nurse will be observed for eight one-hour periods
 - (b) the eight periods for each Head Nurse will cover a full twelve-hour hospital day
 - (c) each Head Nurse will be observed by each of the four observers for two periods
 - (d) the observation periods are distributed (randomly within restrictions a,b,c) throughout the two-week period, Monday to Friday October 15-19 and October 22 to 26.
3. The Schedule provides for 120 observation periods (8 hrs. x 15 Head Nurses) out of a total of 1200 possible periods (10 days x 8 x 15), i.e., 1/10 observation periods available.
4. The observation periods are distributed so that:
 - (a) A Head Nurse will be observed for a maximum of three hours in any one day.
 - (b) An Observer will have a maximum of five observation periods in one day.
5. As indicated above, it is essential to adhere to the prepared Observation Schedule. The following procedure is to be adopted when the Head Nurse is not present for part or all of a specified period:
 - (a) If the observation period of one hour has not been completed when the Head Nurse leaves her ward or unit for breakfast, lunch or supper, the Observer will follow her, keep stop watch going, make summary notes on any activities which would be recorded on duty, and complete the observation hour when the Head Nurse returns to her ward or unit.
 - (b) If the Head Nurse is not on duty at the beginning of the period the Observer will observe the person in charge of the ward, (generally the Assistant Head Nurse but in 1st West the alternate will be Miss Nixon).
 - (b) (i) If the Head Nurse comes on duty during the period the Observer will then start observing her activities (with explanatory notes covering the transition interval).
 - (ii) If the Head Nurse comes on duty within the first 15 minutes of the period the Observer will start the observations on the Head Nurse and complete the full hour for this Head Nurse.

- (c) If the Head Nurse goes off duty and leaves her ward or unit, the Observer will then commence observations on the Assistant Head Nurse or on other person assuming responsibility for the ward or unit but will complete only the hour specified.
 - (d) If the Head Nurse continues to work on the ward when she should be "off duty", the observer will note this circumstance and continue the record to the end of the period, and for a maximum period of 15 minutes over the hour.
6. If the Head Nurse considers at any time during any observation period that the care of the patient would be jeopardized or seriously interfered with by the presence of the Observer she will ask the Observer to stay outside the ward or room or at some appropriate distance. The Observer will do this and fill in the Activity Record subsequently by asking the Head Nurse what she was doing when she was not under immediate observation. The Observer should indicate any such circumstances clearly on the Activity Record.

Research Division
Dept. of National Health and Welfare,
October 13, 1951.

M-945
7.54

2. CLASSIFICATION AND CODE FOR LOCATIONS

(Location of Head Nurse while on Duty)

- 1 Head Nurse Desk
- 2 Student Nurse Desk (alcove or counter)
- 3 Ward Clerk Desk
- 4 Nursing Supervisor's Desk
- 5 Charting Desk
- 6 Chart Rack
- 7 Bulletin Board
- 8 Blackboard
- 9 Nurses' Station
- 11 Medicine Cabinet (or cupboard)
- 12 Narcotics drawer or cupboard
- 13 Drug Table
- 14 Interne Desk
- 19 Rail

- 21 Supply Cupboard (or room)
- 22 Utility Room
- 23 Linen Room
- 24 Kitchen (Ward)
- 25 Refrigerator
- 26 Formula Room

- 32 Treatment Room (or examining room)
- 33 Dressing Room

- 41 Private Accommodation
- 42 Semi Private Accommodation
- 43 Public Accommodation
- 44 Pediatric Accommodation
- 45 Recovery Room
- 46 Bathroom

- 51 Corridor (own unit)
- 52 Sunroom
- 53 Balcony
- 54 Elevator
- 59 Halls, Stairways (outside own unit)

- 61 Nursing Office
- 62 D.V.A. Supervisor's Office
- 63 Nurses' Dining Room
- 64 Ass't. Supt. (Hospital) Office
- 65 Class Room
- 66 Library (Conf. Room)

3. CLASSIFICATION AND CODE FOR PERSONS

(Staff and Other Contacts of Head Nurse)

0-9 Hospital Administration

- 1 hospital superintendent
- 2 hospital assistant superintendent
- 3 admitting department
- 4 booking department
- 5 information desk
- 6 switchboard (exchange)
- 7 porter, delivery boy, messenger
- 8 record office
- 9 elevator man

10-14 Medical

- 11 doctor
- 12 interne
- 13 medical student

15-19 D.V.A. officials

- 15 administration representative
- 16 admitting office
- 17 stenographers and clerks
- 18 maintenance man
- 19 others

20-29 Nursing - Administration

- 21 director of nursing
- 22 assistant directors
- 23 assistant director (night)
- 24 night supervisors
- 25 nursing office (general)
- 26 nurses' residence

30-39 Nursing - School

- 31 associate director
- 32 director of clinical experience
- 33 classroom instructors
- 34 clinical instructors

40-49 Nursing - General

40 supervisor - (Vets. Pav.)
41 supervisor
42 head nurse
43 assistant head nurse
44 general staff nurse
45 special nurse (private duty)
46 student nurses
49 staff (unspecified)

50-59 Nursing - (Auxiliary)

51 ward clerk
52 ward aide
53 orderly
54 attendant (psychiatry)
59 staff (unspecified)

60-79 Other Services and Departments

61 blood team
62 x-ray
62A deep therapy
63 laboratory
64 tumor clinic
65 health service
66 operating room
67 outpatient department
68 blood bank
69 other wards

71 pharmacy
72 dietary
73 physiotherapy
74 occupational therapy
75 social service
76 emergency
77 barber

81-89 Housekeeping

81 housekeeper
82 charwoman
83 cleaner (male)
84 kitchen staff (maids)
85 linen room staff
86 sewing room staff
87 stores

90-94 Maintenance

90 engineer
91 carpenter
92 painter
93 electrician
94 plumber

95-99 Others

95 patient
96 visitors
97 clergy
98 observer
99 others (not specified)

100 Personal
101 Outside agencies

- Notes: 1) Contacts by telephone -- add T to code numbers.
2) For multiple contacts show numbers involved -- add numbers to code as follows:
- a) for individuals, simply the number, e.g. 44-3; this represents a contact with the third of a series of general staff nurses
 - b) for groups, the number circled, e.g., 46-5 represents a contact with five student nurses simultaneously;
 - c) for contacts with individuals belonging to more than one category, show all applicable code numbers, e.g., 11, 95. Put first the code number for the person primarily concerned in the the activity.

4. CLASSIFICATION AND CODE FOR FORMS, EQUIPMENT AND SUPPLIES

I. ADMINISTRATION

Forms

101-109 Hospital administration of patient movement

101 admission form
102 emergency admission slip
103 census
104 transfer slip
105 referral slip - O.P.D.
106 discharge slip
107 discharge file
108 death notice
109 other N.E.S.

110-119 Hospital administration of patient care

110 clothing card
111 valuables card
112 valuables envelope
113 record of services supplied to patients
114 seriously ill slip
115 nurse's casualty complaint report
116 interne's report of accidents to patients in hospital
117 record of wound infections
118 record of medical oxygen and gas
119 other N.E.S.

120-129 Staff administration

120 clinical assignment sheet
121 rotation schedule
122 daily time sheet
123 record of nursing service
124 daily record of special nursing service
125 special nurse's duty slip
126 general service nurse report
127 student record of practical work
128 student report of ward experience and teaching
129 other N.E.S.

012 Equipment (including instruments)

013 Supplies (excluding forms)

II. MEDICAL AND NURSING (TREATMENT)

Forms

200-209 Unit record of patient care

200 patient's chart
201 doctor's standing orders
202 T.P.R. - intake and output
203 medications record
204 bedside notes
205 laboratory sheet
206 treatment lists
207 day and night reports
208 kardex and memos re patient care
209 other N.E.S.

210-219 Other departments' records of patient care

210 laboratory requisitions and reports
211 x-ray requisitions and reports
212 blood bank requisitions and records
213 blood team and interne's work lists
214 anaesthetic record and recovery notes
215 operation and drainage sheet
216 radium records
217 E.C.G. requisitions and reports
218 physiotherapy requisitions and reports
219 other N.E.S.

220-229 Orders and records for medications

220 medicine requisitions
221 narcotic drug requisitions (green)
222 special medical requisitions
223 medical requisition for patient being
discharged (red)
224 medicine cards or ticket
225 drug requisitions
226 narcotic record
227 whisky record
229 other N.E.S.

022 Equipment (including instruments)

023 Supplies (excluding forms, drugs, medicines, and prescriptions)

024 Antiseptics, disinfectants

025 Narcotics

026 Drugs, medicines and prescriptions N.E.S.

027 Patients' equipment and supplies

III. MAINTENANCE AND HOUSEKEEPING

Forms

300-309 Dietary forms

- 301 ward diet list
- 302 special order slip
- 303 special diet slip
- 304 diet card
- 305 diabetic diet card
- 306 diet manual
- 307 menu

- 309 other

310-319 Requisitions for supplies (excluding drugs and medicines)

- 310 requisition for general supplies and repairs
- 311 requisition for sterile supplies
- 312 requisition for food supplies
- 313 requisition for laundry supplies
- 314 requisition for borrowing supplies

- 319 unspecified or other

032 Dietary equipment and supplies

033 Laundry, bedding and linen

034 Housekeeping equipment and supplies

035 Fixtures and facilities

HEAD NURSE STUDY

5. Instructions and Codes for Keysort Card

1. Date

Record		Code	
Month	Day	Wk.	Days
Oct.	15	1	1
	16	1	2
	17	1	3
	18	1	4
	19	1	5
Oct.	22	2	1
	23	2	2
	24	2	3
	25	2	4
	26	2	5

2. Period

1-8 direct code

3. Observers

A, B, C, D direct code

4. Ward

1-15 selector code

5. Nurse observed

Code by Status and Order -within ward

Record	Abbrev.	Code	Order
Supervisor	S	1	1
Head Nurse	HN	2	1
Asst. Head Nurse	AHN	3	1, or 2
Staff Nurse	SN	4	1,2,3, or 4

6. Place

1-66 selector code

8. Equipment and Supply

012-314 selector code

7. Person

1-101 selector code

Signal T for telephone contacts

9. Activity

Selector code

Signal C - any change during activity period in factors 6-Place, 7-Person, 8-Equipment & Supply.

Signal X - for secondary, concurrent factors.

10. C.N.A. Allocation of Functions

Status	Code (See p.4)
Instructor	0
Supervisor	1
Head Nurse	2
Staff Nurse	3
Nursing Asst.	4
Ward Aide	5
Ward Clerk	6

11. Duration (of Activity)

Selector code

6. Code for C.N.A. Allocations of Activities by Nurse Status

C-Status Code No.			P-Patient Care			H-Ward Administration			S-Personnel Administration		
A	B C	A	B C	A	B C	A	B C	A	B C	A	B C
P.111	S-1	P.520	SN-3	568	SN-3	P.631	H-2	H.110	H-2	S.130	H-2
112	S-1	521	SN-3	569	SN-3	632	C-6	111	H-2	S.611	H-2
113	S-1	522	SN-3			633	C-6			612	H-2
114	H-2	523	NA-4	P.571	NA-4	634	H-2	H.121	H-2	613	H-2
		524	NA-4	572	SN-3	635	H-2	122	H-2		
P.120	H-2			573	SN-3	636	C-6	123	H-2	S.150	H-2
121	H-2	P.530	SN-3	574	SN-3			124	H-2		
122	H-2	531	SN-3	575	WA-5	P.640	SN-3	H.130	S-1	S.170	H-2
123	H-2	532	SN-3	576	NA-4	641	SN-3				
		533	SN-3			642	SN-3				
P.131	H-2	534	SN-3	P.581	H-2		C-6	H.141	H-2	S.411	I-O
132	H-2	535	SN-3	582	SN-3	P.651	C-6	142	H-2	412	I-O
133	H-2					652	C-6			413	H-2
134	H-2					653	C-6	H.150	H-2	414	I-O
		P.540	NA-4	P.591	NA-4	654	C-6			S.420	H-2
P.141	H-2	541	NA-4	592	NA-4	655	H-2	H.510	WA-5		
142	H-2	542	NA-4	593	SN-3	656	C-6	511	WA-5	S.431	H-2
		543	NA-4	594	NA-4	659	C-6	512	WA-5	432	H-2
		544	NA-4	595	NA-4			513	WA-5	433	H-2
P.411	SN-3	545	NA-4	596	NA-4		C-6	514	WA-5		
412	SN-3	546	NA-4	597	NA-4	P.660	C-6	515	WA-5	S.511	H-2
413	SN-3	547	NA-4			661	C-6	516	H-2		
		548	NA-4	P.601	SN-3	662	C-6			512	H-2
P.421	SN-3	549	NA-4	602	SN-3	663	C-6	H.631	H-2	513	S-I
422	SN-3			603	H-2	664	C-6	632	H-2	514	H-2
423	SN-3					665	C-6	633	H-2		
424	SN-3	P.550	SN-3			666	C-6	634	H-2	S.520	H-2
		551	SN-3	P.610	H-2	667	C-6			521	H-2
P.431	SN-3	552	SN-3	611	SN-3	668	C-6	H.641	H-2	522	H-2
432	SN-3	553	SN-3	612	H-2	669	C-6	642	H-2	523	H-2
433	SN-3	554	SN-3	613	H-2			643	H-2		
		555	SN-3	614	H-2		C-6	644	H-2		
		556	SN-3	615	H-2	P.670	C-6			S.531	H-2
P.441	SN-3	557	SN-3	616	H-2	671	C-6	H.650	H-2	532	H-2
442	SN-3	559	SN-3	617	SN-3	672	C-6	651	H-2	533	H-2
				618	SN-3	673	C-6	652	H-2		
P.501	H-2	561	NA-4					653	H-2	S.540	H-2
502	H-2	562	NA-4	P.620	SN-3	P.681	SN-3			541	S-1
503	H-2	563	NA-4	621	C-6	682	H-2			542	H-2
				622	SN-3	683	H-2	H.661	H-2	543	H-2
P.511	SN-3	564	NA-4	623	SN-3	684	H-2	662	H-2	544	H-2
512	SN-3	565	NA-4	624	SN-3	685	H-2	663	H-2		
513	SN-3	566	NA-4	625	SN-3						
		567	NA-4	629	H-2		C-6	H.670	H-2		
					H-2						
						Status Code					
						I - Instructor					
						S - Supervisor					
						H - Head Nurse					
						SN - Staff Nurse					
						NA - Nursing Asst.					
						WA - Ward Aide					
						C - Clerk					

7. Notes for Coding and Punching

1. Changes

Where two or more different entries appear during one activity period for any of the factors, 6-Place, 7-Person, 8-Equipment and Supply, enter the first of each to appear even if not present at the beginning of the activity period, record the others below the corresponding place on the card, and indicate their presence by punching C (last hole on card).

2. Primary and Secondary Factors

Enter and punch as the primary factor in each instance the factor most directly and specifically associated with the activity, e.g., where the Head Nurse is using the chart and making an entry on one form, enter the specific form as the primary factor. Record secondary factors immediately below the corresponding section of the card and punch X for such secondary factors. (The first hole on that side of the card). These secondary factors are concurrent with the primary and in this respect are distinguished from the changes referred to above.

Where contact is by telephone code for persons and also mark and punch T
- third hole from left (#28 outer)

3. Coding and Punching Notes

i) Show all entries in the appropriate space on the card and put dash for no entry.

ii) Mark the holes to be punched by red stroke through the corresponding number for the hole.

iii) Zeros are to be punched as follows:

- a) one zero -- outer punch
- b) two zeros - inner punch

iv) The entries for factors 1, 2, 3, 4 and 5 will in general be the same for any one record (activity records for one observation period). These need to be entered only on the first card of the record and can be gang punched with the hand groover when all cards for the record have been completed. Coders should check the top of each page to make sure that there is no change in any of the factors from 1 to 5.

v) It is probably most convenient to mark the holes to be punched immediately after completing the code entries on one side of the card. This saves rotating the card for this purpose as well as punching.

vi) It is probably most convenient to punch from left to right on the bottom of the card first than to rotate the card and punch from left to right on the top of the card.

vii) Hold the punch and the card so that the sides of the notch are straight; i.e., parallel to the end of the card; centre the punch on the hole and do not take out too much of the card. The bottom of the hole and the number corresponding to the hole should be left intact.

viii) Check the punching visually after punching both sides of the card.

ix) It will probably be found less fatiguing if both arms are resting on the edge of the desk with the card in one hand and punch in the other.

x) Number the cards consecutively from the beginning of each period.

May 15, 1952.

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7.54

APPENDIX D

STATISTICAL APPENDIX

APPENDIX D - STATISTICAL APPENDIX

1. Head Nurse; Observer and Period Variation

In this Study, observations were carried on for one hour at a time. The schedule provided for eight hours of observation for each of the fifteen head nurses, a total of 120 hours. The twelve-hour hospital day was represented by eight one-hour periods and the head nurses were observed once for each of these eight periods. The observations were carried out by four observers, each assigned twice to each of the fifteen head nurses. Within these specifications, the observation periods were randomly distributed throughout the 1200 observation hours (8 per day for each of 15 head nurses for 10 days) by selecting eight random numbers as they occurred within the range 1-80 for each head nurse.* As each period was thus selected, the observer was assigned to it in order from a list of permutations of the four letters A, B, C, D.

This design incorporating the principle of randomness ensured an unbiased representation of the head nurse's activities as far as that could be taken care of by statistical devices alone. It also made it possible to compute Standard Errors of the percentages of time involved in various activities and of the Mean Durations of activities. Since the analytical comments concerning relationships between the proportions of time spent in different activities were in general terms rather than a statistical comparison of percentages, it was unnecessary to show the standard errors throughout the tables. However, in order to provide some idea of the sampling variation in these percentages, the following table of standard errors has been prepared.

* Random Numbers from Statistical Tables for Biological, Agricultural, and Medical Research. Ronald A. Fisher and Frank Yates.
Oliver and Boyd, Edinburgh. 1948. Table XXXVIII.

Standard Errors of Percentages Based on Total Activities (14,028)

<u>Proportion</u>			<u>Standard Error</u>		
<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
99.5	.5	.06	85	15	.19
99	1	.08	80	20	.20
98	2	.10	75	25	.21
97	3	.12	70	30	.21
96	4	.13	65	35	.21
95	5	.14	60	40	.21
94	6	.15	55	45	.21
93	7	.16	50	50	.21
92	8	.17			
91	9	.17			
90	10	.18			

The sampling variation, as indicated by the standard errors, is less than 1% for all the percentages based on the total number of activities (14,028), as in Tables 3, 4, 6 and 7. In Table 3 (p.21), for example, the percentages shown for time by area have standard errors of less than 1%.

	<u>%</u>	<u>SE</u>	<u>3 S E range</u>
Patient Care	75.9	0.21	75.3 - 76.5
Ward Administration	12.6	0.19	12.0 - 13.2
Personnel Administration	10.6	0.18	10.1 - 11.1
Other	0.9	0.08	0.7 - 1.1
Total	100.0		

It can be seen that sampling variation is negligible in these cases for our purpose. The probability of the time percentages lying outside the ranges indicated is 0.0027 or the chances are 369 to 1 against this occurring. For individual head nurses the number of activities was about 1,000, so the standard errors here will be about 0.21 - 0.79%.

The design followed for the schedule of observations also enabled us to investigate the variation in the number of activities between head nurses, between periods, and between observers. By using the analysis of variance technique,¹ we find that:

i) There is no statistically significant variation between observers in respect to number of activities observed (and re mean duration since observation time is equal for all periods).

ii) There is no statistically significant variation between head nurses in respect to number of activities observed.

iii) There is a statistically significant variation² between periods; most of this seems to be associated with the relatively smaller number of activities observed during Period 1 (7 to 8 A.M.) and Period 6 (4.30 to 5.30 P.M.).

¹ See following pages 110-113.

² 5% level (Snedecor's F test).

Analyses of Variance - Activities by Head Nurses and Observers

Number of Activities by Observer for Each Head Nurse

Head Nurse No.	Period Observed	Observer				Total Activities	Mean Activities/ Nurse
		A	B	C	D		
1	i	95	129	151	89	987	123.5
	ii	132	137	136	118		
	Sum	227	266	287	207		
2	i	118	159	53	121	810	101.2
	ii	137	72	17	133		
	Sum	255	231	70	254		
3	i	94	138	138	108	931	116.4
	ii	79	140	102	132		
	Sum	173	278	240	240		
4	i	134	90	123	134	988	123.5
	ii	154	116	141	96		
	Sum	288	206	264	230		
5	i	110	130	168	137	1023	127.9
	ii	136	132	136	74		
	Sum	246	262	304	211		
6	i	117	125	132	113	947	118.4
	ii	128	137	103	92		
	Sum	245	262	235	205		
7	i	97	119	132	95	968	121.0
	ii	125	120	136	144		
	Sum	222	239	268	239		
8	i	101	139	134	98	988	123.5
	ii	142	127	138	109		
	Sum	243	266	272	207		
9	i	152	131	140	63	958	119.8
	ii	141	81	115	135		
	Sum	293	212	255	198		
10	i	139	122	102	107	960	120.0
	ii	106	141	128	115		
	Sum	245	263	230	222		
11	i	132	85	132	127	957	119.6
	ii	110	127	110	134		
	Sum	242	212	242	261		
12	i	86	93	112	97	827	103.4
	ii	104	113	127	95		
	Sum	190	206	239	192		
13	i	96	102	102	1	739	92.4
	ii	126	85	120	107		
	Sum	222	187	222	108		
14	i	150	115	129	120	1000	125.0
	ii	143	91	139	113		
	Sum	293	206	268	233		
15	i	129	120	119	109	945	118.1
	ii	113	129	123	103		
	Sum	242	249	242	212		
Total		3626	3545	3638	3219	14028	
Mean		120.8	118.2	121.3	107.3		116.9

Analysis of Variance

I. Head Nurse and Observer Differences

Sums of Squares

1. Correction term, $C = \frac{(14,028)^2}{4 \times 15 \times 2} = \underline{1,639,873}$
2. Total sum of squares $= [(95)^2 + (132)^2 + \dots + (103)^2] - C = \underline{75,101}$
3. Sub-classes (Individual Obs.&H.N.) $= \left[\frac{(227)^2 + (255)^2 + \dots + (212)^2}{2} \right] - C = \underline{46,369}$
4. Within Sub-classes $= 2 - 3 = \underline{28,732}$
5. Between Head Nurses $= \left[\frac{(987)^2 + (810)^2 + \dots + (945)^2}{4 \times 2} \right] - C = \underline{11,123}$
6. Between Observers $= \left[\frac{(3626)^2 + (3545)^2 + (3628)^2 + (3219)^2}{15 \times 2} \right] - C = \underline{3,857}$
7. Interaction (Head Nurses x Observers) $= 3 - (5+6) = \underline{31,389}$

Analysis

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares
Between Head Nurses	11,123	14	794.5
Between Observers	3,857	3	1285.7
Interaction (H.N. x Obs.)	31,389	42	747.4
Residual (Error)	28,732	60	478.9
TOTAL	75,101	119	
Interaction + Residual	60,121	102	589.4

Test of Significance -- "F" Ratio*

Interaction	$= \frac{747.4}{478.9} = 1.56$	<u>Not Significant</u> (F (.05) = 1.58)
Head Nurses	$= \frac{794.5}{589.4} = 1.35$	<u>Not Significant</u> (F (.05) = 1.79)
Observers	$= \frac{1285.7}{589.4} = 2.18$	<u>Not Significant</u> (F (.05) = 2.70)

* Snedecor, Statistical Methods. Fourth Edition. Table 10.7.

Analysis of Variance - Activities by Head Nurses and Periods

Number of Activities by Time of Day for Each Head Nurse

Head Nurse No.	Time of Day (Period No.)								Total Activities	Mean No. Activities
	1	2	3	4	5	6	7	8		
1	89	136	95	137	129	118	132	151	987	123.4
2	121	118	53	137	133	72	159	17	810	101.2
3	94	138	108	138	102	79	132	140	931	116.4
4	90	141	116	134	123	96	134	154	988	123.5
5	74	132	136	130	137	110	136	168	1023	127.9
6	103	137	125	113	92	128	117	132	947	118.4
7	97	95	144	119	125	132	120	136	968	121.0
8	142	101	139	109	138	134	98	127	988	123.5
9	63	152	140	141	135	115	81	131	958	119.8
10	106	139	141	122	128	107	102	115	960	120.0
11	110	132	127	134	132	110	127	85	957	119.6
12	93	113	112	97	86	95	127	104	827	103.4
13	85	120	107	96	102	102	126	1	739	92.4
14	91	115	150	143	120	129	113	139	1000	125.0
15	119	123	109	129	120	103	113	129	945	118.1
Total	1477	1892	1802	1879	1802	1630	1817	1729	14028	
Mean	98.5	126.1	120.1	125.3	120.1	108.7	121.1	115.3	116.9	

II. Head Nurse and Period Differences

Sums of Squares

1. Correction term, $C = \frac{(14,028)^2}{15 \times 8} = \underline{1,639,873}$
2. Total Sum of Squares $\left[(89)^2 + (136)^2 + \dots + (129)^2 \right] - C = \underline{75,101}$
3. Between Head Nurses $= \left[\frac{(987)^2 + (810)^2 + \dots + (945)^2}{8} \right] - C = \underline{11,123}$
4. Between Periods $= \left[\frac{(1477)^2 + (1892)^2 + \dots + (1729)^2}{15} \right] - C = \underline{9,065}$
5. Residual $= 2 - (3+4) = \underline{54,913}$

Analysis

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares
Between Head Nurses	11,123	14	794.5
Between Periods	9,065	7	1295.0
Residual (Error)	54,913	98	560.3
T o t a l	75,101	119	

Test of Significance - "F" ratio

$$\begin{array}{llll}
 \text{Head Nurses} & = & \frac{794.5}{560.3} & = 1.41 \quad \text{Not Significant} \\
 & & & \quad \text{(F from tables 1.79, 2.26)} \\
 \\
 \text{Periods} & = & \frac{1295.0}{560.3} & = 2.31 \quad \text{Significant at 5\% level} \\
 & & & \quad \text{(F from tables 2.10, 2.82)}
 \end{array}$$

D-I. Number and Duration of Activities by Observer

Observer	No. Activities	Duration ¹ Intervals	
		Total	Mean
A	3626	7200	1.99
B	3545	7200	2.03
C	3638	7200	1.98
D	3219	7200	2.24
Total	14028	28800	2.05

D-II. Activities by Area of Activity and Observer

Area of Activity	Observer				Total
	A	B	C	D	
Patient Care	2642	2640	2721	2445	10448
Ward Administration	647	451	489	458	2045
Personnel Administration	270	378	367	295	1310
Total ²	3626	3545	3638	3219	14028

D-III. Time Involved¹ in Activities by Area of Activity and Observer

Area of Activity	Observer				Total
	A	B	C	D	
Patient Care	5431	5522	5459	5446	21858
Ward Administration	1182	796	752	905	3635
Personnel Administration	509	800	915	816	3040
Total ²	7200	7200	7200	7200	28800

D-IV. Percent Time Involved in Activities by Area of Activity
for Each Observer

Area of Activity	Observer				Total
	A	B	C	D	
Patient Care	75.43	76.69	75.82	75.64	75.90
Ward Administration	16.42	11.06	10.44	12.57	12.62
Personnel Administration	7.07	11.11	12.71	11.33	10.56
Total ²	100.00	100.00	100.00	100.00	100.00

¹Duration and Time expressed in Intervals of 15 seconds.

²Total includes 225 other activities amounting to 267 intervals.

D-V. Activities by Level of Activity and Observer

Level of Activity	Observer				Total
	A	B	C	D	
Management	207	244	228	202	881
Supervision	605	604	590	630	2,429
Direction	252	236	243	239	970
Education	78	107	119	62	366
Execution	(2,417)	(2,278)	(2,397)	(2,065)	(9,157)
Direct	1,113	968	1,157	814	4,052
Admin. & Clerical	1,304	1,310	1,240	1,251	5,105
Other	(67)	(76)	(61)	(21)	(225)
In Transit	67	74	59	19	219
Personal	-	2	2	2	6
Total	3,626	3,545	3,638	3,219	14,028

D-VI. Time Involved* in Activities by Level of Activity and Observer

Level of Activity	Observer				Total
	A	B	C	D	
Management	472	655	646	546	2,319
Supervision	1,134	1,183	1,177	1,282	4,776
Direction	321	345	336	338	1,340
Education	174	283	452	380	1,289
Execution	(5,021)	(4,652)	(4,515)	(4,621)	(18,809)
Direct	2,223	1,996	2,064	1,709	7,992
Admin. & Clerical	2,798	2,656	2,451	2,912	10,817
Other	(78)	(82)	(74)	(33)	(267)
In Transit	78	77	66	25	246
Personal	-	5	8	8	21
Total	7,200	7,200	7,200	7,200	28,800

D-VII. Percent Time Involved in Activities by Level of Activity and Observer

Level of Activity	Observer				Total
	A	B	C	D	
Management	6.56	9.10	8.97	7.58	8.05
Supervision	15.75	16.43	16.35	17.81	16.58
Direction	4.46	4.79	4.67	4.69	4.65
Education	2.42	3.93	6.28	5.28	4.48
Execution	(69.74)	(64.61)	(62.71)	(64.18)	(65.31)
Direct	30.87	27.72	28.67	23.74	27.75
Admin. & Clerical	38.86	36.89	34.04	40.44	37.56
Other	(1.08)	(1.14)	(1.03)	(0.46)	(0.93)
In Transit	1.08	1.07	0.92	0.35	0.85
Personal	-	0.07	0.11	0.11	0.07
Total	100.00	100.00	100.00	100.00	100.00

*Time expressed in intervals of 15 seconds.

APPENDIX D

2. Status of Nurse Observed

In this Study the object of observation was to be the Head Nurse - the person in charge of a ward or unit. Instructions to Observers (Appendix C) were to observe the head nurse, but when the head nurse was off duty for some reason the person actually in charge of the ward at the time was to be observed; this was usually the assistant head nurse but occasionally a supervisor or a staff nurse was in charge for some time. It was considered that this policy of strict adherence to the schedule would provide the most representative and unbiased picture of head nurse activities. It would also throw some light on the amount of time she was not present and the activities of her substitute.

Data for the activity and time relationships according to the nurse actually observed are shown in Tables D.VIII-XIV, inclusive. For nearly 60% of the time the head nurse herself was present and observed; about one-quarter of the time the assistant was in charge; about 12% a staff nurse, and 5% a supervisor. Since the observation periods were randomly distributed over the ten days this is rather an interesting sidelight on the duty hours of the head nurse.

It was important to know, of course, whether this would seriously affect our observations based on analysis of the data. We have discussed mostly differences in percentage of time involved in activities of various kinds by area and level, and so on. Our data now show that there was no practical difference in the activity pattern for head nurses themselves as compared with that for all nurses observed. Differences were usually within 1% of the time or a maximum of about 3%.

The only differences worth noting are that the assistant head nurse and staff nurse spent a somewhat greater proportion of the time in patient care than did the head nurse and less in personnel administration, as might be expected. The supervisor, on the other hand, spent a great deal more time in management activities than did the head nurse. The latter devoted more time to management and supervision and less to execution than the assistant head nurse and staff nurse. It is of some interest that the assistant head nurse spent considerable time in execution - administrative and clerical.

The comparison of head nurse time with total time for all nurses observed is, however, the significant one here; differences between head nurses and specific other categories must be interpreted with caution since the observation time for the latter was small, and no observations were planned for these categories. Therefore they may not be representative of their activities when replacing the head nurse and probably are not representative of their functions when acting in their usual capacities.

D-VIII. Number and Duration of Activities by Status of Nurse Observed

Status of Nurse Observed	No. Activities	Duration ¹ (Intervals)		Percent Distribution	
		Number	Mean	Activities	Time
Supervisor	696	1,440	2.07	4.96	5.00
Head Nurse	8,145	16,560	2.03	58.06	57.50
Asst. Head Nurse	3,652	7,440	2.04	26.03	25.83
Staff Nurse	1,535	3,360	2.19	10.94	11.67
Total	14,028	28,800	2.05	99.99	100.00

D-IX. Activities by Area of Activity for Each Status of Nurse Observed

Status of Nurse Observed	Area of Activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
Supervisor	497	99	84	696
Head Nurse	6,042	1,203	780	8,145
Asst. Head Nurse	2,795	494	302	3,652
Staff Nurse	1,114	249	144	1,535
Total	10,448	2,045	1,310	14,028

D-X. Time Involved¹ in Activities by Area of Activity for Each Status of Nurse Observed

Status of Nurse Observed	Area of Activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
Supervisor	1,073	191	157	1,440
Head Nurse	12,225	2,108	2,084	16,560
Asst. Head Nurse	5,937	852	578	7,440
Staff Nurse	2,623	484	221	3,360
Total	21,858	3,635	3,040	28,800

D-XI. Percent Time Involved in Activities by Area of Activity for Each Status of Nurse Observed

Status of Nurse Observed	Area of Activity			Total ²
	Patient Care	Ward Admin.	Personnel Admin.	
Supervisor	74.51	13.26	10.90	99.99
Head Nurse	73.82	12.73	12.58	99.99
Asst. Head Nurse	79.80	11.45	7.77	100.00
Staff Nurse	78.07	14.40	6.58	100.00
Total	75.90	12.62	11.56	100.01

¹Duration and time expressed in Intervals of 15 seconds.

²Total includes 225 other activities amounting to 267 intervals.

D-XII. Activities by Level of Activity for Each Status of Nurse Observed

Status of Nurse Observed	Level of Activity						Grand Total		
	Management	Supervision	Direction	Education	Execution				
					Direct	Admin. & Clerical	Other		
Supervisor	69	127	66	36	233	149	382	16	696
Head Nurse	544	1,418	601	216	2,351	2,895	5,246	120	8,145
Asst. H. Nurse	183	647	224	87	1,042	1,408	2,450	61	3,652
Staff Nurse	85	237	79	27	426	653	1,079	28	1,535
Total	881	2,429	970	366	4,052	5,105	9,157	225	14,028

D-XIII. Time Involved* in Activities by Level of Activity for Each Status of Nurse Observed

Status of Nurse Observed	Level of Activity							Grand Total
	Management	Supervision	Direction	Education	Execution			
					Direct	Admin.& Clerical	Total	
Supervisor	367	233		65	376	291	667	19
Head Nurse	1,357	2,841	89	912	4,612	5,876	10,488	143
Asst.H.Nurse	412	1,184	819	247	2,083	3,130	5,213	73
Staff Nurse	183	518	311	65	921	1,520	2,441	32
Total	2,319	4,776	1,340	1,289	7,992	10,817	18,809	267
								28,800

D-XIV. Percent Time Involved in Activities by Level of Activity for Each Status of Nurse Observed

Status of Nurse Observed	Level of Activity						Grand Total		
	Management	Supervision	Direction	Education	Execution				
					Direct	Admin.& Clerical			
								Total	
Supervisor	25.49	16.18	6.18	4.51	26.11	20.21	46.32	1.32	100.00
Head Nurse	8.19	17.16	4.95	5.51	27.85	35.48	63.33	0.86	100.00
Asst. H.Nurse	5.54	15.91	4.18	3.32	28.00	42.07	70.07	0.98	100.00
Staff Nurse	5.45	15.42	3.60	1.93	27.41	45.24	72.65	0.95	100.00
Total	8.05	16.58	4.65	4.48	27.75	37.56	65.31	0.93	100.00

*Time expressed in Intervals of 15 seconds.

APPENDIX E

COMPLETE CLASSIFICATION AND CODE SYSTEM FOR ACTIVITIES

APPENDIX E

COMPLETE CLASSIFICATION AND CODE SYSTEM FOR ACTIVITIES

1. Number of Activity Code Items by Area, Level, and Groups

Level	Area	P - Patient Care		H - Ward Admin.		S - Personnel Admin.	
		Group	No. Items	Group	No. Items	Group	No. Items
<u>MANAGEMENT</u> 100-199		P.110-9	4	H.110-9	2	S.110-9	(1)
		120-9	4	120-9	4	120-9	(1)
		130-9	4/	130-9	1	130-9	1
		140-9	2	140-9	2	140-9	2
				150-9	1	150-9	1
						160-9	(1)
Total 32			14		10	170-9	1
							8
<u>EDUCATION</u> 400-499		P.410-9	3	H.410-9	(1)	S.410-9	4
		420-9	4	420-9	(1)	420-9	1
		430-9	3			430-9	3
		440-9	2				
Total 22			12		2		8
<u>EXECUTION - DIRECT</u> 500-599		P.500-9	3				
		510-9	3	H.510-9	8	S.510-9	4
		520-9	4	520-9	9	520-9	4
		530-9	5/	530-9	6	530-9	3
		540-9	10	540-9	2	540-9	5
		550-9	10/	550-9	3		
		560-9	9				
		570-9	6/				
		580-9	2				
		590-9	7				
Total 103			59		28		16
<u>EXECUTION --</u> <u>CLERICAL & ADMIN.</u> 600-699		P.600-9	3				
		610-9	8	H.610-9	4	S.610-9	3
		620-9	7	620-9	7	620-9	6
		630-9	6	630-9	4	630-9	5
		640-9	3	640-9	4	640-9	3
		650-9	7	650-9	4		
		660-9	10	660-9	3		
		670-9	4	670-9	1		
		680-9	5				
Total 97			53		27		17
Total Execution 200			112		55		33
TOTAL BY AREA			138		67		49
GRAND TOTAL....254							
2							
256							
Total Groups		59	27	17		15	

Note: 1) Items in brackets are activities in the classification which were not observed at any time.

2) Additional 2 items to Grand Total are for:
300 - Personal Activities
200 - Unallocated time, in transit, etc.

3) / sign indicates existence of sub-divisions of code for specific activities.

APPENDIX E 2. Summary of Activities and Time Involved
According to the Complete Classification System and C.N.A. Allocation of Activities

Code No.	Description	C.N.A. Alloc.	Total		Supervision Activities	Direction Activities	Time
			Activities	Time			
P.100-699	<u>PATIENT CARE (NURSING)</u>		10,448	21,858	2,063	745	1,025
P.100-199	<u>MANAGEMENT</u> (analysis, planning and organization)		669	1,813	-	-	-
P.110-9	<u>Analysis</u>		71	214	-	-	-
P.111	analyzing and evaluating the kind and amount of nursing service required in the unit						
112	identifying nursing problems needing study and co-operating in their solution	Sup.	2	2	-	-	-
113	assisting in the study of methods of nursing care and service for the purpose of promoting their continuous improvement	Sup.	-	-	-	-	-
114	assessing the supplies of drugs and medicines against the patient requirements	Sup.	-	-	-	-	-
P.120-9	<u>Planning and co-operation</u>	H.N.	69	212	-	-	-
P.120	planning nursing care of patients	H.N.	422	821	-	-	-
121	planning with the medical staff for the care of patients	H.N.	1	5	-	-	-
122	planning for the assistance required by the members of the medical staff and other professional personnel and co-operating with them in providing for the patient's total needs	H.N.	196	437	-	-	-
123	planning with nursing staff for care of patients	H.N.	23	34	-	-	-
P.130-9	<u>Organization of nursing care</u>	H.N.	202	345	-	-	-
P.131	providing for the administration of treatment and medications ordered by the medical staff	H.N.	128	620	-	-	-
132	providing for accurately descriptive records of the treatments carried out by nurses and of the nursing care of patients	H.N.	-	-	-	-	-
133	organizing the time of nursing personnel and the assignment of duties so as to facilitate prompt and effective performance. (Preparing rotation schedule and clinical assignment sheet)	H.N.	3	5	-	-	-
134	co-ordinating the services rendered by other professional personnel with those of the nursing personnel in the unit in the interest of adequate patient care	H.N.	121	603	-	-	-
P.140-9	<u>Conferring with the administration about nursing needs and special problems</u>	H.N.	4	12	-	-	-
P.141	consultations initiated by the administration	H.N.	48	158	-	-	-
142	consultations initiated by the Head Nurse	H.N.	41	129	-	-	-
			7	29	-	-	-

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction
			Activi- ties	Time	Activi- ties	Time	
	<u>SUPERVISION</u> (check, review, evaluate) Supervisory functions and activities are coded by adding <u>S</u> to the appropriate code item under other sections of the classification						
	<u>DIRECTION</u> (assign, order, instruct) Functions and activities involving immediate directions, orders, or assignments are coded by adding <u>D</u> to the appropriate code item under other sections of the classification						
P.400-499	<u>EDUCATION</u> (teach, explain, rehabilitate, demonstrate)		319	648	10	16	18
P.410-9	Advising patient regarding illness and treatment	S.N.	137	310	2	2	5
P.411	re medication	S.N.	37	87	1	1	-
412	re nature of illness	S.N.	24	52	-	-	-
413	re treatment	S.N.	76	171	1	1	5
P.420-9	Assisting in the rehabilitation of patients		18	47	3	7	6
P.421	assisting patient with grooming	S.N.	1	5	-	-	-
422	assisting patient with hobbies	S.N.	1	3	-	-	-
423	assisting patient with walking	S.N.	9	27	3	7	5
424	assisting patient with other physical exercise	S.N.	7	12	-	-	1
P.430-9	Teaching conservation and restoration of health		151	253	3	3	7
P.431	advising patient regarding diet	S.N.	62	118	-	-	-
432	advising patient regarding physical activities	S.N.	70	105	2	2	7
433	advising patient regarding social activities	S.N.	19	30	1	1	-
P.440-9	Advising patient's family re patient		13	38	2	4	-
P.441	patient's condition	S.N.	2	4	1	1	-
442	care of patient	S.N.	11	34	1	3	-

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
P.500-699	<u>EXECUTION (carrying out)</u>		9,460	19,397	2,073	4,128	732	1,007
P.500-599	<u>Nursing care of patient</u>		4,103	7,906	1,186	2,197	555	770
P.500-9	<u>Observing & recognizing symptoms, conditions & causes</u>		995	1,720	49	58	5	7
P.501	<u>General symptoms and conditions</u>	H.N.	522	891	23	24	-	-
502	<u>Symptoms and conditions of disease</u>	H.N.	363	678	17	24	5	7
503	<u>Symptoms and conditions due to diet, drugs, etc.</u>	H.N.	110	151	9	10	-	-
P.510-9	<u>Assisting physician in examining patients,</u>							
	<u>giving treatments and making diagnostic tests</u>		259	1,021	2	2	4	5
P.511	<u>Assisting physician with treatments</u>	S.N.	29	236	-	-	-	-
512	<u>Assisting with examinations, tests, specimens</u>	S.N.	63	282	2	2	2	2
513	<u>Accompanying physicians on rounds to patients</u>	S.N.	167	503	-	-	2	3
P.520-9	<u>Preparing supplies & equipment for nursing procedures</u>		159	331	44	76	30	42
P.520	<u>Preparing supplies & equipment, general & unspec.</u>	S.N.	1	1	-	-	-	-
521	<u>Routine preparation of equipment</u>	S.N.	44	144	9	25	7	10
522	<u>Routine preparation of treatment trays</u>	S.N.	59	88	31	45	18	24
523	<u>Preparing equipment for sterilization</u>	N.A.	4	5	-	-	1	1
524	<u>Terminal care of equipment and supplies</u>	N.A.	51	93	4	6	4	7
P.530-9	<u>Preparing and administering drugs and medications,</u>		717	1,462	388	859	167	233
P.530	<u>diets, test meals</u>		1	1	1	1	-	-
531	<u>Preparing and administering drugs and medications,</u>	S.N.						
	<u>etc., general and unspecified</u>							
	<u>measuring drugs incl. narcotics (pouring)</u>							
	<u>(preparing hypos)</u>							
532	<u>Administering drugs and medication</u>	S.N.	103	291	66	174	7	9
533	<u>Labelling, verification and care of drugs</u>	S.N.	353	696	217	501	112	155
534	<u>Preparing and serving diets</u>	S.N.	148	286	41	78	11	15
535	<u>Preparing and serving test meals</u>	S.N.	112	188	63	105	37	54
P.540-9	<u>Carrying out routine diagnostic and therapeutic procedures</u>	S.N.	-	-	-	-	-	-
P.540	<u>Carrying out routine diagnostic and therapeutic</u>		265	361	120	168	80	101
	<u>procedures, general and unspecified</u>	N.A.	12	16	8	12	4	4
541	<u>taking temperature, pulse, respiration</u>	N.A.	64	83	21	29	6	6
542	<u>weighing and measuring patient</u>	N.A.	12	13	4	4	6	7
543	<u>collecting specimens</u>	N.A.	43	60	25	36	18	24
544	<u>giving enemas</u>	N.A.	43	60	28	40	11	14
545	<u>applying poultices, fomentations, compresses</u>	N.A.	8	16	4	5	3	4
546	<u>applying ice cap, hot water bottle</u>	N.A.	6	7	3	4	3	3
547	<u>putting patient in appropriate body position</u>	N.A.	56	78	15	20	22	31
548	<u>giving inhalation</u>	N.A.	1	2	1	2	-	-
549	<u>other</u>	N.A.	20	26	11	16	7	8

Code No.	Description	Total		Supervision		Direction	
		C.N.A. Alloc.	Activi- ties	Time	Activi- ties	Time	Activi- ties
P.550-9	Carrying out special nursing procedures	375	760	266	544	81	120
P.550	carrying out special nursing procedures(gen. & unspec.)	1	1	1	1	-	-
551	injections & transfusions(intravenous & interstitial)	119	210	100	176	16	24
552	irrigations, suction and drainage	56	128	41	98	9	17
553	catheterization	29	58	22	39	4	4
554	giving oxygen and carbon dioxide	19	43	10	20	4	8
555	removal of clips and sutures	15	51	10	32	3	5
556	dressings	67	104	43	59	20	29
557	preoperative preparations(incl. sterile preps.)	32	104	20	91	10	11
559	other	37	61	19	28	15	22
P.560-9	Direct care for patient's well-being	636	1,104	92	133	53	64
P.561	bathing patient	14	26	9	20	4	4
562	caring for elimination	77	100	47	63	23	28
563	feeding patient	35	85	8	15	7	8
564	dressing and undressing patient	19	28	4	4	5	7
565	shaving patient	1	1	-	-	1	1
566	mental hygiene of patient	390	729	-	-	5	5
567	making the patient comfortable	49	68	14	20	4	6
568	advising the patient re privileges and conditions	43	58	6	7	2	2
569	other	8	9	4	4	2	3
P.570-9	Care on behalf of patient	423	713	61	102	76	99
P.571	care for the patient's unit(making bed, etc.)	131	187	8	13	20	29
572	relationships with family and friends	82	141	19	26	3	3
573	giving attention to patient's possessions	85	184	22	42	12	16
574	protecting patient's interests	57	109	3	11	2	3
575	looking for patient	30	48	6	7	4	7
576	answering lights	38	44	3	3	35	41
P.580-9	Carrying on preventive nursing procedures	49	81	2	2	4	11
P.581	protection from disease(patient and others)	49	81	2	2	4	11
582	precautions in use of drugs	-	-	-	-	-	-
P.590-9	Moving the patient:	225	353	162	253	55	88
P.591	within the ward	21	36	12	23	5	8
592	transfers between wards	8	13	5	8	2	2
593	to and from operating room	28	45	25	38	3	7
594	to and from X-ray	23	31	11	16	12	15
595	to and from other depts.	34	56	18	26	15	28
596	admissions	29	47	24	42	5	5
597	discharges	82	125	67	100	13	23

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
P.600-699	Administrative and Clerical Functions <u>re Patient Care</u>		5,357	11,491	887	1,931	177	237
P.600-9	Receiving orders from medical staff		421	642	45	72	2	3
P.601	receiving verbal orders from the doctor	S.N.	142	230	7	15	-	-
602	reading doctor's standing orders or prescriptions	S.N.	258	381	35	53	2	3
603	receiving report of doctor's orders from staff	H.N.	21	31	3	4	-	-
P.610-9	Receiving information re patients from:		903	1,579	13	31	2	2
610	unspecified source	H.N.	2	5	-	-	-	-
611	medical staff	S.N.	84	123	-	-	-	-
612	nursing staff	H.N.	293	410	-	-	1	1
613	other departments	H.N.	48	87	10	12	-	-
614	kardex	H.N.	138	252	-	-	1	1
615	patient's records	H.N.	199	340	2	18	-	-
616	notebook (calendar pad, etc.)	H.N.	55	83	1	1	-	-
617	patient	S.N.	39	60	-	-	-	-
618	receiving report from nursing staff	S.N.	45	219	-	-	-	-
P.620-9	Direct recording of symptoms, conditions, causes		409	699	221	408	11	15
P.620	recording on chart	S.N.	126	259	108	231	6	10
621	T.P.R.	C.	51	72	23	33	1	1
622	bedside notes	S.N.	115	195	64	100	-	-
623	intake and output	S.N.	31	56	23	40	2	2
624	anaesthetic recovery notes	S.N.	8	15	1	1	1	1
625	memos on rounds re symptoms, etc.	H.N.	77	100	1	1	1	1
629	other	H.N.	1	2	1	2	-	-
P.630-9	Recording information re patient		738	1,715	48	84	12	17
P.631	recording doctor's orders (verbal)	H.N.	129	235	26	44	8	10
632	recording information from other departments (e.g., lab. reports)		45	139	3	4	2	2
633	making kardex entries	C.	245	560	1	3	-	-
634	making out day and night reports	H.N.	149	543	4	12	-	-
635	making memos (informal)	H.N.	137	188	-	-	-	-
636	making out bed tags, chart tickets, etc.	C.	33	50	14	21	2	5
P.640-9	Recording administration of:		138	476	102	420	10	14
P.640	medications, general and unspecified	S.N.	2	5	2	5	-	-
641	medications, treatments, diets	S.N.	61	107	42	77	3	3
642	narcotics and alcohol	S.N.	75	364	58	338	7	11

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
P. 650-9	Writing orders, directions and assignments for unit staff re:							
P. 651	medications (incl. medicine cards)	C.	336	848	55	97	3	3
652	diet (incl. special orders for ward kitchens)	C.	177	420	17	23	2	2
653	routine care of patient (e.g. P.540-9, 560-9)	C	14	26	3	7	-	-
654	special services for patients (e.g., P.550-9)	H.N.	41	98	11	21	-	-
655	nursing records (e.g., P.620-9, 630-9)	H.N.	77	274	21	42	1	1
656	movement of patients in and out of ward	C.	25	28	1	2	-	-
659	other	C.	-	-	-	-	-	-
P. 660-9	Writing orders and requisitions and making arrangements re services involving persons not on unit staff							
P. 660	professional services, general and unspecified	C.	1,139	2,726	348	732	106	142
661	medical staff including interne service	C.	2	2	-	-	-	-
662	blood team or blood bank	C.	160	266	28	41	5	5
663	medications (from pharmacy)	C.	184	492	53	156	10	15
664	laboratory procedures	C.	228	497	61	123	28	33
665	x-ray procedures	C.	276	738	82	148	32	40
666	appointments for clinics, treatments and operations	C.	56	140	20	33	10	14
667	special duty nurse	C.	63	135	26	38	3	8
668	diet	C.	23	72	10	29	2	3
669	other	C.	143	375	67	161	15	21
P. 670-9	Assembling and maintaining information re patients							
P. 670	assembling patients' records	C.	4	9	1	3	1	3
671	filing records	C.	457	590	41	65	28	36
672	making patient's records available to those entitled to them	C.	215	272	11	21	4	5
673	looking for records	C.	122	145	8	10	5	7
P. 680-9	Giving information re patient to:							
P. 681	medical staff	S.N.	116	167	21	31	19	24
682	nursing staff	H.N.	816	2,216	14	22	3	5
683	other departments	H.N.	325	555	5	7	-	-
684	family and friends of patients	H.N.	266	416	1	2	-	-
685	giving report to nursing staff	H.N.	33	57	2	5	1	1
		H.N.	46	97	6	8	2	4
		H.N.	146	1,091	-	-	-	-

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
H.100-699	<u>WARD ADMINISTRATION (NON-NURSING)</u>		2,045	3,635	309	564	208	291
H.100-199	<u>MANAGEMENT</u> (analysis, planning and organization)		157	324	2	7	-	-
H.110-9	Planning the maintenance of a comfortable, orderly, clean and safe environment for patients							
H.110	planning for a suitable environment for patients	H.N.	6	15	1	5	-	-
111	investigating accidents	H.N.	4	6	-	-	-	-
H.120-9	Planning for supplies and equipment		2	9	1	5	-	-
H.121	planning for the securing of supplies & equipment	H.N.	84	152	1	2	-	-
122	planning for the distribution of supplies & equipment	H.N.	22	36	-	-	-	-
123	planning for the maintenance of supplies & equipment	H.N.	3	6	-	-	-	-
124	providing for the conservation and economical use of equipment and supplies	H.N.	37	62	1	2	-	-
H.130-9	Co-ordinating the services of other departments with the general administration of the ward		22	48	-	-	-	-
H.130	co-ordinating the services of other departments with work of the ward		4	12	-	-	-	-
H.140-9	Keeping the administration informed of unit housekeeping needs and housekeeping problems	Sup.	4	12	-	-	-	-
H.141	consultations initiated by the administration		24	74	-	-	-	-
142	consultations initiated by the head nurse	H.N.	19	57	-	-	-	-
H.150-9	Planning for proper use of accommodation	H.N.	5	17	-	-	-	-
H.150	planning for proper use of accommodation		39	71	-	-	-	-
	<u>SUPERVISION</u> (check, review, evaluate)		39	71	-	-	-	-
	Supervisory functions and activities are coded by adding <u>S</u> to the appropriate code item under other sections of the classification.							
	<u>DIRECTION</u> (assign, order, instruct)							
	Functions and activities involving immediate directions, orders, or assignments are coded by adding <u>D</u> to the appropriate code item under other sections of the classification.							
H.400-499	<u>EDUCATION</u> (teach, explain, demonstrate)		-	-	-	-	-	-
H.410-9	Teaching and demonstrating principles of good management		-	-	-	-	-	-
H.420-9	Teaching and demonstrating principles of preventive measures		-	-	-	-	-	-

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
H.500-699	<u>EXECUTION (carrying out)</u>		1,388	3,311	307	557	208	291
H.500-599	Ward Housekeeping		1,427	2,473	224	391	155	211
H.510-9	<u>Creating & maintaining proper physical environment incl.:</u>		441	779	57	96	36	56
H.510	care of the general ward surroundings	W.A.	1	2	1	2	-	-
511	care of sick room incl. equipment, (making beds(empty))	W.A.	63	128	14	30	17	26
512	care of nursing station	W.A.	111	168	-	-	1	1
513	care of other rooms	W.A.	78	107	16	27	4	5
514	care of utensils and supplies	W.A.	142	303	23	31	8	14
515	attention to general sanitation	W.A.	44	65	2	3	5	7
516	attention to accident and fire hazards	H.N.	1	3	-	-	1	3
519	other	H.N.	1	3	1	3	-	-
H.520-9	<u>Securing, maintaining, storing and distributing supplies and equipment</u>		724	1,160	96	162	79	102
H.521	securing and disposing of supplies and equipment	W.A.	43	68	20	32	17	22
522	securing and disposing of laundry supplies	W.A.	10	17	5	8	5	9
523	securing and disposing of food supplies	W.A.	8	13	4	8	-	-
524	securing and returning supplies - other departments	W.A.	35	53	20	35	11	14
525	securing the services of personnel for maintenance of facilities							
526	securing, distributing, and storing nursing supplies	W.A.	24	39	8	17	1	1
527	" " " housekeeping	W.A.	204	415	24	38	18	21
528	" " " office	W.A.	76	138	8	15	15	20
529	other	W.A.	322	415	7	9	11	14
H.530-9	<u>Checking (counting) supplies and equipment</u>		46	108	7	34	2	2
H.531	checking sterile supplies	W.A.	10	22	1	2	-	-
532	checking general nursing supplies and equipment	W.A.	26	48	3	8	1	1
533	checking laundry and linen	W.A.	6	32	2	23	1	1
534	checking housekeeping supplies	W.A.	1	1	-	-	-	-
535	checking food supplies	W.A.	1	1	1	1	-	-
536	checking office supplies	C.	2	4	-	-	-	-
H.540-9	<u>Preparing and serving diets (regular meals)</u>		108	252	46	72	21	30
H.541	distributing menus	W.A.	6	7	1	1	-	-
542	serving trays	W.A.	102	245	45	71	21	30
H.550-9	<u>Looking for equipment and supplies</u>		108	174	18	27	17	21
H.551	looking for keys	C.	11	16	-	-	-	-
552	looking for nursing supplies and equipment	W.A.	64	107	14	20	14	18
553	looking for housekeeping supplies and equipment	W.A.	33	51	4	7	3	3

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
H.600-699	Administrative and clerical functions re ward administration (non-nursing)		461	838	83	166	53	80
H.610-9	Making out records of patient movement	C.	53	138	21	63	3	4
H.610	records of patient movement, general & unspecified	C.	1	1	1	1	-	-
611	daily census report	C.	22	76	9	46	1	2
612	transfer slip	C.	8	24	1	1	1	1
613	discharge slip	C.	21	35	9	13	1	1
619	other	C.	1	2	1	2	-	-
H.620-9	Making out administrative records relating to patients	C.	19	35	5	8	3	7
H.620	administrative records, general & unspecified	HN	1	1	-	-	-	-
621	seriously ill report	HN	-	-	-	-	-	-
622	death records	C.	2	2	2	2	-	-
623	accident reports	HN	4	8	1	2	1	2
624	Complaint reports	HN	-	-	-	-	-	-
625	notifiable disease report	C.	2	7	1	3	-	-
629	other	C.	10	17	1	1	2	5
H.630-9	Making out requisitions for supplies and equipment	C.	36	249	19	43	5	8
H.631	General supplies and equipment	C.	75	196	16	34	1	2
632	laundry supplies	C.	11	39	1	5	2	3
633	food supplies	C.	3	5	-	-	-	-
634	borrowing supplies	C.	6	9	3	4	2	3
H.640-9	Giving and receiving information relating to equipment and supplies, and accommodation		146	182	5	9	4	6
H.641	giving information re equipment and supplies	C.	43	58	-	-	-	-
642	receiving information re equipment and supplies	C.	44	53	4	8	3	4
643	giving and receiving information re keys	C.	57	68	1	1	1	2
644	giving and receiving information about accommodation	C.	2	3	-	-	-	-
H.650-9	Giving and receiving information regarding hospital policy, regulations, and layout		73	115	7	12	2	5
H.650	giving general and unspecified information regarding hospital layout and policy	C.	7	10	-	-	2	5
651	giving location of patients to the public	C.	25	36	1	1	-	-
652	giving hospital regulations re visiting hours to the public	C.	25	36	2	2	-	-
653	receiving information re hospital regulations	HN	16	33	4	9	-	-
H.660-9	Delivering forms, records, or reports to:		74	118	26	31	36	50
H.661	medical staff	C.	1	1	-	-	1	1
662	nursing staff	C.	11	16	4	5	4	5
663	other departments	C.	62	101	22	26	31	44
H.670-9	Recording information about equipment and supplies	-	1	1	-	-	-	-
H.670	recording information about equipment and supplies	HN	1	1	-	-	-	-

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Acti- ties	Time	Acti- ties	Time	Acti- ties	Time
S.100-999	<u>PERSONNEL ADMINISTRATION</u>		1310	3040	37	68	17	24
S.100-199	Management		57	189	-	-	-	-
S.110-9	Planning methods of recording and evaluating the service given by nursing staff and auxiliary workers		-	-	-	-	-	-
S.120-9	Planning methods of evaluating and dealing with criticisms of staff		-	-	-	-	-	-
S.130-9	Assisting in the planning for teaching medical and nursing personnel in the program of in-service education (including orientation)		7	29	-	-	-	-
S.130	planning for in-service education of medical and nursing personnel	HN	7	29	-	-	-	-
S.140-9	Conferring with the administration re staff consultations initiated by the administration	HN	23	68	-	-	-	-
S.141	consultations initiated by the head nurse	HN	17	45	-	-	-	-
S.150-9	Planning the assignment of staff in the light of personal factors and considerations	HN	6	23	-	-	-	-
S.150	planning assignment of staff in light of personal factors	HN	23	52	-	-	-	-
S.160-9	Planning methods of communication with staff	HN	23	52	-	-	-	-
S.170-9	Planning social activities involving staff participation	HN	4	40	-	-	-	-
S.170	Planning social activities involving staff participation	HN	4	40	-	-	-	-
	<u>SUPERVISION (check, review, evaluate)</u>							
	Supervisory functions and activities are coded by adding <u>S.</u> to the appropriate code item under other sections of the classification.							
	<u>DIRECTION</u>							
	(assign, order, instruct)							
	Functions and activities involving immediate directions, orders, or assignments are coded by adding D to the appropriate code item under other sections of the classification.							
S.400-499	<u>EDUCATION (teach, explain, demonstrate)</u>		75	683	2	3	3	5
S.410-9	Participate in the teaching of nursing personnel	I	54	180	1	1	2	3
S.411	formal classroom teaching	I	-	-	-	-	-	-
412	formal ward teaching	HN	-	-	-	-	-	-
413	informal teaching on the ward	I	53	177	1	1	2	3
414	supervision of examinations, reading papers, etc.	I	1	3	-	-	-	-
S.420-9	Using opportunities to enrich the clinical experience of staff nurses		1	3	-	-	-	-
S.420	informing staff of clinical problems on the ward	HN	1	3	-	-	-	-
S.430-9	Using opportunities to improve own knowledge and abilities clinical and nursing	HN	20	500	1	2	1	2
S.431	administrative	HN	14	42	-	-	-	-
432	attending staff conferences	HN	1	1	-	-	-	-
433		HN	5	457	1	2	1	2

Code No.	Description	C.N.A. Alloco.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
S.500-699	<u>EXECUTION (carrying out)</u>		1178	21.68	35	65	14	19
500-699	<u>Maintaining appropriate relationships with hospital personnel including orientation and counselling service</u>							
S.510-9	<u>Counselling unit staff regarding work, status, etc.</u>		663	11.98	7	9	4	7
S.511	<u>discussing work proficiency and work standards with individual staff members</u>		17	1.22	-	-	-	-
512	<u>discussing personal plans, privileges and problems with individual staff members</u>	HN	2	19	-	-	-	-
513	<u>discussing problems of pay, employment status, hours of work, etc., with individual staff members</u>	HN	9	22	-	-	-	-
514	<u>discussing complaints and criticisms with individual staff members</u>	Sup.	5	14	-	-	-	-
S.520-9	<u>Maintaining good relationships with hospital staff</u>							
S.520	<u>looking after the interests of hospital personnel</u>	HN	1	67	-	-	-	-
521	<u>carrying out introductions between hospital personnel</u>	HN	369	564	-	-	-	-
522	<u>greeting hospital personnel</u>	HN	14	19	-	-	-	-
523	<u>incidental conversation with hospital personnel</u>	HN	113	138	-	-	-	-
S.530-9	<u>Exchanging information with hospital staff regarding hours of duty, assignments</u>	HN	241	405	-	-	-	-
S.531	<u>hours of duty, meals, etc.</u>		225	298	4	6	1	1
532	<u>patient assignments</u>	HN	121	161	-	-	1	1
533	<u>classes, appointments, lectures, etc.</u>	HN	51	66	-	-	-	-
S.540-9	<u>Orientation of hospital staff</u>	HN	53	71	4	6	-	-
S.540	<u>orientation of hospital staff, general & unspecified</u>		42	214	3	3	3	6
541	<u>hospital policy and regulations</u>	HN	3	3	3	3	-	-
542	<u>ward layout and services</u>	Sup.	1	1	-	-	-	-
543	<u>staff characteristics and relationships</u>	HN	12	64	-	-	1	4
544	<u>patient characteristics (including introductions)</u>	HN	2	2	-	-	-	-
		HN	24	144	-	-	2	2

Code No.	Description	C.N.A. Alloc.	Total		Supervision		Direction	
			Activi- ties	Time	Activi- ties	Time	Activi- ties	Time
S.600-699	Administrative and clerical functions relating to personnel		525	970	28	56	10	12
S.610-9	Preparing staff records (including discussions)		4	5	-	-	-	-
S.611	records of graduate nurse staff	HN	-	-	-	-	-	-
612	records of student nurse staff	HN	3	4	-	-	-	-
613	records of auxiliary nursing staff	HN	1	1	-	-	-	-
S.620-9	Receiving and appraising criticisms, complaints, and commendations regarding performance by members of staff:							
S.620	staff, general and unspecified	HN	24	84	-	-	-	-
621	graduate nurses	HN	6	24	-	-	-	-
622	students	HN	3	11	-	-	-	-
623	auxiliary nursing personnel	HN	1	4	-	-	-	-
624	medical personnel	HN	9	32	-	-	-	-
625	other departments or wards	HN	4	10	-	-	-	-
S.630-9	Working with routine personnel records	HN	1	3	-	-	-	-
S.630	personnel records, general and unspecified		65	240	16	33	4	5
631	time sheet	C	1	1	-	-	1	1
632	in and out book	C	48	198	9	18	-	-
633	other routine records	C	2	2	1	1	-	-
634	looking for personnel records	C	7	18	2	4	2	3
S.640-9	Giving or obtaining information re location or movements of staff	C	7	21	3	10	1	1
S.641	looking for staff		432	641	13	23	6	7
642	receiving information re location and movements of staff	C	243	409	12	22	6	7
643	giving information re location and movements of staff	C	78	101	-	-	-	-
-200	IN TRANSIT, ETC.	C	111	131	1	1	-	-
-300	PERSONAL ACTIVITIES	HN	219	246	-	-	-	-
Total		HN	6	21	-	-	-	-
			14028	28800	2429	4776	970	1340

† Sup. - Supervisor
HN - Head Nurse
S.N. - Staff Nurse
N.A. - Nursing Assistant
W.A. - Ward Aide
C - Ward Clerk

APPENDIX F

ACTIVITIES AND TIME BY WARD GROUPS

APPENDIX F - ACTIVITIES AND TIME BY WARD GROUPS

F-1. Number and Duration of Activities by Ward Status

Ward Status	Ward Nos.	No. Activities	Duration ¹ (Intervals)	
			Total	Mean
Private	9,10,11	2,875	5,760	2.00
Semi-Private	4,7,8,14,15	4,889	9,600	1.96
Public	1,5,6	2,957	5,760	1.95
Veterans	12,13	1,566	3,840	2.45
Pediatrics	2,3	1,741	3,840	2.21
T o t a l	1-15	14,028	28,800	2.05

F-2. Activities by Area of Activity for Each Ward Status

Area of Activity	W a r d S t a t u s					T o t a l (1-15)
	Private (9,10,11)	Semi-Private (4,7,8,14,15)	Public (1,5,6)	Veterans' (12,13)	Pediatrics (2,3)	
Patient Care	2,099	3,740	2,107	1,152	1,350	10,448
Ward Administration	366	660	576	236	207	2,045
Personnel Administration	353	424	232	147	154	1,310
T o t a l ²	2,875	4,889	2,957	1,566	1,741	14,028

F-3. Time Involved¹ in Activities by Area of Activity for Each Ward Status

Area of Activity	W a r d S t a t u s					T o t a l (1-15)
	Private (9,10,11)	Semi-Private (4,7,8,14,15)	Public (1,5,6)	Veterans' (12,13)	Pediatrics (2,3)	
Patient Care	4,390	7,613	4,151	2,801	2,903	21,858
Ward Administration	588	1,083	1,093	495	376	3,635
Personnel Administration	719	825	465	507	524	3,040
T o t a l ²	5,760	9,600	5,760	3,840	3,840	28,800

F-4. Percent Time Involved in Activities by Area of Activity for Each Ward Status

Area of Activity	W a r d S t a t u s					T o t a l (1-15)
	Private (9,10,11)	Semi-Private (4,7,8,14,15)	Public (1,5,6)	Veterans' (12,13)	Pediatrics (2,3)	
Patient Care	76.22	79.30	72.07	72.94	75.60	75.90
Ward Administration	10.21	11.28	18.98	12.89	9.79	12.62
Personnel Administration	12.48	8.59	8.07	13.20	13.65	10.56
T o t a l ²	100.00	100.00	100.00	100.00	100.00	100.00

¹ Duration and Time expressed in Intervals of 15 seconds.

² Total includes 225 other activities amounting to 267 intervals.

F-5. Activities by Level of Activity for Each Ward Status

Level of Activity	Ward Status					Total (1-15)
	Private (9,10,11)	Semi-Private (4,7,8,14,15)	Public (1,5,6)	Veterans' (12,13)	Pediatrics (2,3)	
Management	165	306	175	111	124	881
Supervision	460	866	535	222	346	2,429
Direction	223	353	196	85	113	970
Education	94	146	65	24	37	366
Execution	(1,876)	(3,153)	(1,944)	(1,093)	(1,091)	(9,157)
Direct	973	1,337	893	433	416	4,052
Admin. & Clerical	903	1,816	1,051	660	675	5,105
Other	(57)	(65)	(42)	(31)	(30)	(225)
In Transit	56	63	40	31	29	219
Personal	1	2	2	-	1	6
T o t a l	2,875	4,889	2,957	1,566	1,741	14,028

F-6. Time Involved* in Activities by Level of Activity for Each Ward Status

Level of Activity	Ward Status					Total (1-15)
	Private (9,10,11)	Semi-Private (4,7,8,14,15)	Public (1,5,6)	Veterans' (12,13)	Pediatrics (2,3)	
Management	373	759	482	265	440	2,319
Supervision	887	1,665	982	572	670	4,776
Direction	318	483	258	132	149	1,340
Education	282	308	121	301	277	1,289
Execution	(3,837)	(6,306)	(3,866)	(2,533)	(2,267)	(18,809)
Direct	1,909	2,597	1,701	1,026	759	7,992
Admin. & Clerical	1,928	3,709	2,165	1,507	1,508	10,817
Other	(63)	(79)	(51)	(37)	(37)	(267)
In Transit	61	74	41	37	33	246
Personal	2	5	10	-	4	21
T o t a l	5,760	9,600	5,760	3,840	3,840	28,800

F-7. Percent Time Involved in Activities by Level of Activity for Each Ward Status

Level of Activity	Ward Status					Total (1-15)
	Private (9,10,11)	Semi-Private (4,7,8,14,15)	Public (1,5,6)	Veterans' (12,13)	Pediatrics (2,3)	
Management	6.48	7.91	8.37	6.90	11.46	8.05
Supervision	15.40	17.34	17.05	14.90	17.45	16.58
Direction	5.52	5.03	4.48	3.44	3.88	4.65
Education	4.90	3.21	2.10	7.84	7.21	4.48
Execution	(66.61)	(65.69)	(67.12)	(65.96)	(59.04)	(65.31)
Direct	33.14	27.05	29.53	26.72	19.77	27.75
Admin. & Clerical	33.47	38.64	37.59	39.24	39.27	37.56
Other	(1.09)	(0.82)	(0.89)	(0.96)	(0.96)	(0.93)
In Transit	1.06	0.77	0.71	0.96	0.86	0.85
Personal	0.03	0.05	0.17	-	0.10	0.07
T o t a l	100.00	100.00	100.00	100.00	100.00	100.00

* Time expressed in Intervals of 15 seconds.

F-8. Number and Duration of Activities by Type of Ward

Type of Ward	Ward Nos.	No. Activities	Duration ¹ (Intervals)	
			Total	Mean
Medical	5,9,14	2,981	5,760	1.93
Surgical	1,4,6,7,8,15	5,823	11,520	1.98
Mixed Med. & Surg.	10,11	1,917	3,840	2.00
Veterans	12,13	1,566	3,840	2.45
Children's	2,3	1,741	3,840	2.21
T o t a l	1-15	14,028	28,800	2.05

F-9. Activities by Area of Activity for Each Type of Ward

Area of Activity	Type of Ward					Total
	Medical (5,9,14)	Surgical (1,4,6,7,8,15)	Mixed Med. & Surg. (10,11)	Veterans' (12,13)	Children's (2,3)	
Patient Care	2,249	4,281	1,416	1,152	1,350	10,448
Ward Administration	455	926	221	236	207	2,045
Personnel Administration	230	535	244	147	154	1,310
T o t a l ²	2,981	5,823	1,917	1,566	1,741	14,028

F-10. Time Involved¹ in Activities by Area of Activity for Each Type of Ward

Area of Activity	Type of Ward					Total
	Medical (5,9,14)	Surgical (1,4,6,7,8,15)	Mixed Med. & Surg. (10,11)	Veterans' (12,13)	Children's (2,3)	
Patient Care	4,534	8,663	2,957	2,801	2,903	21,858
Ward Administration	736	1,675	353	495	376	3,635
Personnel Administration	436	1,083	490	507	524	3,040
T o t a l ²	5,760	11,520	3,840	3,840	3,840	28,800

F-11. Percent Time Involved in Activities by Area of Activity for Each Type of Ward

Area of Activity	Type of Ward					Total
	Medical (5,9,14)	Surgical (1,4,6,7,8,15)	Mixed Med. & Surg. (10,11)	Veterans' (12,13)	Children's (2,3)	
Patient Care	78.72	75.20	77.01	72.94	75.60	75.90
Ward Administration	12.78	14.54	9.19	12.89	9.79	12.62
Personnel Administration	7.57	9.40	12.76	13.20	13.65	10.56
T o t a l ²	100.00	100.00	100.00	100.00	100.00	100.00

¹ Duration and Time expressed in Intervals of 15 seconds.

² Total includes 225 other activities amounting to 267 intervals.

F-12. Activities by Level of Activity for Each Type of Ward

Level of Activity	Type of Ward					Total
	Medical (5,9,14)	Surgical (1,4,6,7,8,15)	Mixed Med. & Surg. (10,11)	Veterans' (12,13)	Children's (2,3)	
Management	178	374	94	111	124	881
Supervision	469	1,068	324	222	346	2,429
Direction	205	429	138	85	113	970
Education	94	153	58	24	37	366
Execution	(1,988)	(3,718)	(1,267)	(1,093)	(1,091)	(9,157)
Direct	895	1,642	666	433	416	4,052
Admin. & Clerical	1,093	2,076	601	660	675	5,105
Other	(47)	(81)	(36)	(31)	(30)	(225)
In Transit	46	77	36	31	29	219
Personal	1	4	-	-	1	6
T o t a l	2,981	5,823	1,917	1,566	1,741	14,028

F-13. Time Involved* in Activities by Level of Activity for Each Type of Ward

Level of Activity	Type of Ward					Total
	Medical (5,9,14)	Surgical (1,4,6,7,8,15)	Mixed Med. & Surg. (10,11)	Veterans' (12,13)	Children's (2,3)	
Management	396	1,016	202	265	440	2,319
Supervision	886	2,032	616	572	670	4,776
Direction	282	577	200	132	149	1,340
Education	215	312	184	301	277	1,289
Execution	(3,927)	(7,484)	(2,598)	(2,533)	(2,267)	(18,809)
Direct	1,629	3,216	1,362	1,026	759	7,992
Admin. & Clerical	2,298	4,268	1,236	1,507	1,508	10,817
Other	(54)	(99)	(40)	(37)	(37)	(267)
In Transit	52	84	40	37	33	246
Personal	2	15	-	-	4	21
T o t a l	5,760	11,520	3,840	3,840	3,840	28,800

F-14. Percent Time Involved in Activities by Level of Activity for Each Type of Ward

Level of Activity	Type of Ward					Total
	Medical (5,9,14)	Surgical (1,4,6,7,8,15)	Mixed Med. & Surg. (10,11)	Veterans' (12,13)	Children's (2,3)	
Management	6.87	8.82	5.26	6.90	11.46	8.05
Supervision	15.38	17.64	16.04	14.90	17.45	16.58
Direction	4.90	5.01	5.21	3.44	3.88	4.65
Education	3.73	2.71	4.79	7.84	7.21	4.48
Execution	(68.18)	(64.97)	(67.66)	(65.96)	(59.04)	(65.31)
Direct	28.28	27.92	35.47	26.72	19.77	27.75
Admin. & Clerical	39.90	37.05	32.19	39.24	39.27	37.56
Other	(0.93)	(0.86)	(1.04)	(0.96)	(0.96)	(0.92)
In Transit	0.90	0.73	1.04	0.96	0.86	0.85
Personal	0.03	0.13	-	-	0.10	0.07
T o t a l	99.99	100.01	100.00	100.00	100.00	99.99

* Time expressed in Intervals of 15 seconds.

F-15. Number and Duration of Activities by Sex of Ward Patients

Sex of Ward Patients		No. Activities	Duration ¹ (Intervals)	
	Ward Nos.		Total	Mean
Male	6,12,13,14,15	4,458	9,600	2.15
Female	1,4,7,8	3,931	7,680	1.95
Both Sexes	5,9,10,11	3,898	7,680	1.97
Children	2,3	1,741	3,840	2.21
T o t a l	1-15	14,028	28,800	2.05

F-16. Activities by Area of Activity and Sex of Ward Patients

Area of Activity	Sex of Ward Patients				T o t a l (1-15)
	Male (6,12,13,14,15)	Female (1,4,7,8)	Both Sexes (5,9,10,11)	Children (2,3)	
Patient Care	3,265	2,960	2,873	1,350	10,448
Ward Administration	734	554	550	207	2,045
Personnel Administration	376	372	408	154	1,310
T o t a l ²	4,458	3,931	3,898	1,741	14,028

F-17. Time Involved¹ in Activities by Area of Activity and Sex of Ward Patients

Area of Activity	Sex of Ward Patients				T o t a l (1-15)
	Male (6,12,13,14,15)	Female (1,4,7,8)	Both Sexes (5,9,10,11)	Children (2,3)	
Patient Care	7,010	6,024	5,921	2,903	21,858
Ward Administration	1,488	893	878	376	3,635
Personnel Administration	999	709	808	524	3,040
T o t a l ²	9,600	7,680	7,680	3,840	28,800

F-18. Percent Time Involved in Activities by Area of Activity for Each Sex Type of Ward

Area of Activity	Sex of Ward Patients				T o t a l (1-15)
	Male (6,12,13,14,15)	Female (1,4,7,8)	Both Sexes (5,9,10,11)	Children (2,3)	
Patient Care	73.02	78.44	77.10	75.60	75.90
Ward Administration	15.50	11.63	11.43	9.79	12.62
Personnel Administration	10.11	9.23	10.52	13.65	10.56
T o t a l ²	100.00	100.00	100.00	100.00	100.00

¹ Duration and Time expressed in Intervals of 15 seconds.

² Total includes 225 other activities amounting to 267 intervals.

F-19. Activities by Level of Activity and Sex of Ward Patients

Level of Activity	Sex of Ward Patients				T o t a l (1-15)
	Male (6,12,13,14,15)	Female (1,4,7,8)	Both Sexes (5,9,10,11)	Children (2,3)	
Management	275	272	210	124	881
Supervision	690	747	646	346	2,429
Direction	262	316	279	113	970
Education	126	87	116	37	366
Execution	(3,022)	(2,464)	(2,580)	(1,091)	(9,157)
Direct	1,331	1,022	1,283	416	4,052
Admin. & Clerical	1,691	1,442	1,297	675	5,105
Other	(83)	(45)	(67)	(30)	(225)
In Transit	81	43	66	29	219
Personal	2	2	1	1	6
T o t a l	4,458	3,931	3,898	1,741	14,028

F-20. Time Involved* in Activities by Level of Activity and Sex of Ward Patients

Level of Activity	Sex of Ward Patients				T o t a l (1-15)
	Male (6,12,13,14,15)	Female (1,4,7,8)	Both Sexes (5,9,10,11)	Children (2,3)	
Management	690	724	465	440	2,319
Supervision	1,415	1,467	1,224	670	4,776
Direction	383	420	388	149	1,340
Education	505	182	325	277	1,289
Execution	(6,504)	(4,833)	(5,205)	(2,267)	(18,809)
Direct	2,898	1,871	2,464	759	7,992
Admin. & Clerical	3,606	2,962	2,741	1,508	10,817
Other	(103)	(54)	(73)	(37)	(267)
In Transit	96	46	71	33	246
Personal	7	8	2	4	21
T o t a l	9,600	7,680	7,680	3,840	28,800

F-21. Percent Time Involved in Activities by Level of Activity for Each Sex Type of Ward

Level of Activity	Sex of Ward Patients				T o t a l (1-15)
	Male (6,12,13,14,15)	Female (1,4,7,8)	Both Sexes (5,9,10,11)	Children (2,3)	
Management	7.19	9.43	6.05	11.45	8.05
Supervision	14.74	19.10	15.94	17.45	16.58
Direction	3.99	5.47	5.05	3.88	4.65
Education	5.26	2.37	4.23	7.21	4.48
Execution	(67.75)	(62.93)	(67.77)	(59.03)	(65.31)
Direct	30.19	24.36	32.08	19.77	27.75
Admin. & Clerical	37.56	38.57	35.69	39.27	37.56
Other	(1.07)	(0.70)	(0.95)	(0.96)	(0.92)
In Transit	1.00	0.60	0.92	0.86	0.85
Personal	0.07	0.10	0.03	0.10	0.07
T o t a l	100.00	100.00	99.99	99.99	99.99

* Time expressed in Intervals of 15 seconds.

F-22. Number and Duration of Activities by Nurse Status of Ward

Nurse Status of Ward	Ward Nos.	No. Activities	Duration ¹ (Intervals)	
			Total	Mean
Graduate Nurse Wards	12-15	3,511	7,680	2.01
Other Wards	1-11	10,517	21,120	2.19
T o t a l	1-15	14,028	28,800	2.05

F-23. Activities by Area of Activity and Nurse Status of Ward

Area of Activity	Nurse Status of Ward		T o t a l (1-15)
	Graduate Nurse Wards (12-15)	Other Wards (1-11)	
Patient Care	2,638	7,810	10,448
Ward Administration	525	1,520	2,045
Personnel Administration	288	1,022	1,310
T o t a l ²	3,511	10,517	14,028

F-24. Time Involved¹ in Activities by Area of Activity and Nurse Status of Ward

Area of Activity	Nurse Status of Ward		T o t a l (1-15)
	Graduate Nurse Wards (12-15)	Other Wards (1-11)	
Patient Care	5,797	16,061	21,858
Ward Administration	977	2,658	3,635
Personnel Administration	832	2,208	3,040
T o t a l ²	7,680	21,120	28,800

F-25. Percent Time Involved in Activities by Area of Activity and Nurse Status of Ward

Area of Activity	Nurse Status of Ward		T o t a l (1-15)
	Graduate Nurse Wards (12-15)	Other Wards (1-11)	
Patient Care	75.48	76.05	75.90
Ward Administration	12.72	12.59	12.62
Personnel Administration	10.83	10.45	10.56
T o t a l ²	100.00	100.00	100.00

¹ Duration and Time expressed in Intervals of 15 seconds.

² Total includes 225 other activities amounting to 267 intervals.

F-26. Activities by Level of Activity and Nurse Status of Ward

Level of Activity	Nurse Status of Ward		T o t a l (1-15)
	Graduate Nurse Wards (12-15)	Other Wards (1-11)	
Management	231	650	881
Supervision	515	1,914	2,429
Direction	208	762	970
Education	98	268	366
Execution	(2,399)	(6,758)	(9,157)
Direct	1,016	3,036	4,052
Admin. & Clerical	1,383	3,722	5,105
Other	(60)	(165)	(225)
In Transit	59	160	219
Personal	1	5	6
T o t a l	3,511	10,517	14,028

F-27. Time Involved* in Activities by Level of Activity and Nurse Status of Ward

Level of Activity	Nurse Status of Ward		T o t a l (1-15)
	Graduate Nurse Wards (12-15)	Other Wards (1-11)	
Management	571	1,748	2,319
Supervision	1,105	3,671	4,776
Direction	309	1,031	1,340
Education	453	836	1,289
Execution	(5,168)	(13,641)	(18,809)
Direct	2,226	5,766	7,992
Admin. & Clerical	2,942	7,875	10,817
Other	(74)	(193)	(267)
In Transit	73	173	246
Personal	1	20	21
T o t a l	7,680	21,120	28,800

F-28. Percent Time Involved in Activities by Level of Activity and Nurse Status of Ward

Level of Activity	Nurse Status of Ward		T o t a l (1-15)
	Graduate Nurse Wards (12-15)	Other Wards (1-11)	
Management	7.43	8.28	8.05
Supervision	14.39	17.38	16.58
Direction	4.02	4.88	4.65
Education	5.90	3.96	4.48
Execution	(67.29)	(64.59)	(65.31)
Direct	28.98	27.30	27.75
Admin. & Clerical	38.31	37.29	37.56
Other	(0.96)	(0.91)	(0.93)
In Transit	0.95	0.82	0.85
Personal	0.01	0.09	0.07
T o t a l	99.99	100.00	99.99

* Time expressed in Intervals of 15 seconds.

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